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MEDICAL CAUTIONS,

CHIEFLY FOR THE

CONSIDERATION

OF

INVALIDS.

MEDICAL CAUTIONS;

CHIEFLY FOR THE

CONSIDERATION

OF

INVALIDS.

CONTAINING

ESSAYS

ON

Faſhionable Diſeaſes
The dangerous Effects of Hot and Crouded Rooms.
An Enquiry into the Uſe of Medicine during a Courſe of Mineral Waters.

On Quacks, Quack Medicines, and Lady Doctors.

AND

An Eſſay on REGIMEN, very much enlarged.

THE SECOND EDITION.

TO WHICH ARE NOW ADDED,

APPENDIX I. Containing farther Animadverſions on a celebrated Quack Medicine, and Remarks on the Medical Powers and Uſe of the DULCIFIED ACIDS.

APPENDIX II. An Eſſay on THERAPEUTICS.

PUBLISHED FOR THE BENEFIT OF

THE GENERAL HOSPITAL AT BATH.

By JAMES MAKITTRICK ADAIR, M. D.

Member of the Royal Medical Society,

And Fellow of the Royal College of Phyſicians, Edinburgh.

Nullius addictus jurare in verba magiſtri.

HOR. Lib. I. Ep. 1.

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OF

THE GENERAL HOSPITAL AT BATH,

THIS SECOND EDITION

OF

MEDICAL CAUTIONS

IS VERY RESPECTFULLY DEDICATED

BY

THE AUTHOR.

Bath, April 16th, 1787.

INSCRIPTION *in the Pump-Room, Bath.*

" The HOPITAL in this City,
Appropriated ſolely to BATH CASES,
And open to the Poor and Afflicted
of every Part of the World,
(Bath only excepted)
Being deſtitute of a Fund in any degree
adequate to its Support,
Is moſt earneſtly recommended to the
Patronage and Protection of the Humane
and Liberal Part of Mankind.

" OH! pauſe awhile, whoe'er thou art
That drink'ſt this healing ſtream:—
If e'er Compaſſion o'er thy heart
Diffus'd its heavenly beam,

Think on the wretch, whoſe diſtant lot
This friendly aid denies;
Think how in ſome poor, lonely cot
He unregarded lies!

Hither

Hither th' afflicted Stranger bring,
Relieve his heartfelt Woe,
And let thy Bounty, like this Spring,
In genial Currents flow.

So be thy Years from Want, and Pain,
And pining Sickneſs free,
And thou from Heav'n that Debt obtain
The poor Man owes to thee."

The author of the above inſcription, and of the verſes annexed, is a very ingenious, learned, and truly reſpectable gentleman of this city; who, by theſe lines, his Monody on the death of the Marquis of Taviſtock, his Bath Guide, Election Ball, &c. has given the moſt incontrovertible proofs of ſuperior excellence, not only in the pathetic, but the humorous ſtile of poetry:—A rare inſtance of poetical genius!

IT may be proper to obſerve, that this excellent Inſtitution incurs an annual expence of one thouſand eight hundred pounds, whilſt its permanent revenue does not exceed five hundred pounds.

PREFACE.

THE firſt edition of the Medical Cautions having been ſo rapidly ſold off, as to have been many months out of print; the author has been induced to publiſh a ſecond.

Some additions have been made to the Eſſay on Faſhionable Diſeaſes; and the author has the pleaſure of knowing that the juſtice of his ſtrictures has not only been acknowledged by ſome of the profeſſion, but has afforded full conviction to ſeveral invalids.

It is with much ſatisfaction he underſtands that his Second Eſſay has induced ſeveral perſons to obviate the bad effects of hot and foul air, by adopting the expedients he propoſed; and he flatters himſelf that the new facts and arguments which occur in this edition, will contribute to extend the beneficial conſequences which muſt reſult from ſuch ſalutary regulations.

Some

Some very abſurd opinions entertained by invalids who reſort to watering-places; and a deſire to vindicate the phyſicians who attend there, from illiberal imputations, induced the author to republiſh the Third Eſſay.

That the Eſſay on Empiriciſm has been of ſome uſe, appears from the alarm it has given to the Quacks, who, by anonymous* and avowed attacks,† have manifeſted their apprehenſions

* A friend of the author's, having read the firſt edition of this work, told him he certainly would be *ſtung* by ſome of theſe empirical *waſps*; but the manifold attacks made upon him by the anonymous letters, newſpaper ſquibs, pamphlets, and baſe but bungling incendiary artifices, of thoſe *dull illiterate knaves*, have only evinced them to be mere *drones*.

† A perſon who aſſumes the title of M. D. has publiſhed ſtrictures on the firſt edition of this work. The author is very much diſpoſed to pay ſuch a degree of reſpect to every candid and liberal criticiſm, as either to adopt the correction, or aſſign his reaſons for adhering to his own opinions; but his friends have inſiſted that his antagoniſt is totally unworthy of notice or reply; Alledging, "that his criticiſm ſavours much more of the *Black-*"*ſmith's ſhop* than of the *lamp*, that it is impoſſible any Univer-"ſity could, *after due examinations*, as this man aſſerts, have "granted him a medical degree; and that his attack upon the "author, whether critical or perſonal, manifeſts ſo much groſs "ignorance and flagrant falſhood, that in the opinion of every "man of common ſenſe, he muſt be deemed to be abſolutely "*felo de ſe*."

The preſent profeſſors of medicine in the Univerſity of Aberdeen have declared, that no ſuch perſon as *Stephen Freeman* has been graduated by them; and therefore there is juſt ground to believe

apprehenſions that the author's ſtrictures might, eventually, make a due impreſſion on the public; and expoſe the ignorance, fraud, and impoſture, of thoſe peſts of ſociety.

It is the duty of every phyſician to diſcountenance empirical practice; not from the ſordid conſideration of its interfering with his profeſſional emolument; but from an entire conviction of the injury the public may ſuſtain, by confiding in, and employing, men who are totally ignorant of medical knowledge.

The author thinks himſelf peculiarly qualified for the taſk; having, for many years, taken much pains in detecting the ignorance and knavery of ſome of the moſt celebrated quacks;* and having alſo beſtowed conſider-

believe that this illiterate quack has arrogated to himſelf a title to which he has no claim.

The authors of the Critical Review ſeem to give credit to this man's aſſertion, that his family was *not* ſubſiſted by a pariſh at Antigua: unimportant as the fact may be to the public, the author of the Medical Cautions, jealous of his reputation as a man of candour and truth, is permitted by a gentleman of rank of that country, now in England, to aſſert the fact; and he having been a member of the veſtry of that pariſh by which theſe people were long ſupported, will, if it be neceſſary, perſonally authenticate the truth of the allegation.

* A friend of the author's propoſes, that the biſhops, who are, by an old law, authoriſed to *examine* and licence medical practitioners,

able attention, and incurred ſome expence, in analyſing their noſtrums.

The author has been led, by the nature of his plan, to make ſome farther animadverſions on a quack medicine taken notice of in the firſt volume; this has produced an attack from the proprietor of the patent, in which, it is alledged, he has been aſſiſted by ſome medical men, who have neither done any credit to themſelves, nor their profeſſion, by eſpouſing ſuch a cauſe.

He is exceedingly ſorry he has been obliged to engage the reader's attention, even for a moment, to any circumſtance which could be deemed perſonal: conſcious that no credit

titioners, ſhould interpoſe, and extirpate theſe *medical heretics* the quacks; who, though they bid defiance to the ſtatute law, would not be able to evade the all-powerful graſp of the eccleſiaſtical juriſdiction: but ſhould their lordſhips decline a duty ſo worthy of them, he thinks the quacks might be tranſported to Botany Bay; as cheats and impoſtors would be very fit companions for rogues and felons; and to compenſate for the loſs of the medicine tax, he propoſes that each Lady Doctor, of which he computes there may be, at leaſt, 100,000 in the Britiſh dominions, ſhall take out licences annually at a guinea each; by which they will be qualified to preſcribe *kitchen phyſic only*; under a penalty, if they attempt to preſcribe medicine; and that by ſuch a regulation the revenue would not only be augmented, but the *conſumption* of his Majeſty's liege ſubjects would be diminiſhed to the amount of many thouſands annually.

can

can be acquired by ſuch conteſts, it was with extreme reluctance he took any notice of the groveling, yet malignant, attacks of his antagoniſts; but it was in ſome meaſure unavoidable. Perſons of high rank, or exalted character, *may* decline the taſk; but thoſe who have no claim to diſtinction *muſt*, negatively or poſitively, defend themſelves; otherwiſe ſilence implies acquieſcence under the imputation.

After the work was printed off, the author had an opportunity of examining a copy of *Tickell*'s patent, ſtamped, and authenticated by the proper officer, upon which a few remarks may be made.

1*ſt*. From this ſpecification it ſhould ſeem that it undergoes four diſtillations, the deſcription of which ſavours more of empirical trick than of chemical ſkill; for two of them are, on every juſt chemical principle, unneceſſary; and the ablution of the acid by water, is leſs judicious and effectual than the addition of alcali.

2*dly*. Diſtillation is totally unneceſſary, if the æther is prepared in the moſt expeditious and œconomical manner; for the oils are ſoluble in æther, by ſimple mixture; and there

there is no doubt but *T.* adds them in a much larger proportion without diſtillation, as in the ſpecimen at the hoſpital.

3*dly*. The reader muſt perceive, on peruſing the firſt Appendix, with what preciſion the nature of this noſtrum, and its diſguiſing ingredients, have been aſcertained; inſomuch that even an examination of the patent cannot throw any new light on the ſubject. The error taken notice of by the Critical Reviewers in the firſt volume, reſpecting the oleum dulce, was merely typographical.

4*thly*. If allowance be made for the waſte of the oil of juniper, or of the camphor, which is added in the third diſtillation; its proportion to the æther will not really be more than 1 in 100; though it apparently conſtitutes 1 in 64; and the ſame obſervation is applicable to what *T.* in the true empirical cant, terms *oleum polychreſtum verum*, or the ſweet oil; and therefore neither of the additions can be of any importance in a medicine the doſe of which is a few drops only.

5*thly*. This noſtrum therefore, as is alledged in the Appendix, is in no eſſential point different from that which Mr. *T.* communicated

to

to *Sir J. Banks*, with a liberality of ſpirit which did him honour: *O ſi ſic omnia!*

The reſpectable authorities of profeſſors *Cullen* and *Black* will induce every candid reader to believe that neither Mr. *T*'s liquor mineralis Hoffmani, nor his quack æther, can, in any reſpect, have ſuperior powers to the æther of the ſhops; but that in truth they are inferior to it.

When the author read *Tickell*'s Xth caſe, his own experience in ſuch caſes convinced him that he had been guilty of groſs miſrepreſentation. The boy has been examined by a very reſpectable and judicious medical man of this place, who found him in a ſtate nearly bordering on idiotiſm, and was informed by the mother that he had from ſix to twelve fits daily; and could not be left a moment by himſelf: how different is this from *Tickell*'s report!

That gentleman alſo examined *Mary Moore*, the ſubject of caſe XI, and was informed that ſhe had had but one fit in ten days; and that the medicine had certainly been of uſe. Candour requires that juſtice ſhould be done to Mr. *T.* in every inſtance. It may be obſerved, however, that this was a recent caſe, and

ſeems

ſeems to be of that ſpecies which is termed hyſterico-epileptic, in which common æther is ſometimes of uſe as a palliative, and *T*'s æther has hitherto been no more; but in genuine and inveterate epilepſy, ſuch as the boy's, Mr. *T*'s noſtrum certainly will not ſucceed; and he who can diſcover what will —*erit magnus Apollo.*

On a very careful and candid enquiry into the ſucceſs of Mr. *T*'s remedy, it is probable that the number of caſes in which it has failed is nearly, if not fully, double of thoſe he has given to the public; and ſeveral of theſe unſucceſsful caſes are ſimilar to thoſe in which he deems his noſtrum to be *ſpecific* and *infallible*.

It has been remarked,* that the legiſlature of this kingdom, convinced of the deſtructive conſequences of empirical practice, enacted laws for the prevention of it; and that, at certain periods, quacks have been puniſhed with ſeverity, and peculiar marks of ignominy; but they have, of late years, become unuſually bold and inſolent, partly from the ſordid and ſhameful practice of granting them patents; and partly in conſequence of the medicine act; inſomuch, that

* Eſſay on Empiriciſm.

one

one of them, in a pamphlet he lately publiſhed,† aſſerts, that he and his brethren practiſe under royal and parliamentary authority.‡

But this cannot be the caſe, becauſe prerogative in this country cannot ſuperſede the laws of the land, and the old law is not repealed; therefore, by exempting medicines employed in regular practice from taxation, the legiſlature has manifeſtly marked the quacks as illegal intruders: and as Parliament might not chuſe to interfere directly with that branch of prerogative, by which patents are granted, ſometimes for very good

† Strictures on *Adair*'s Medical Cautions, by S. *Freeman*, M. D.

‡ It has been alledged, by quacks and their abettors, that they cure perſons who have been given up by the regulars. The allegation is not totally deſtitute of truth; and indeed the ſucceſs of empiriciſm may, in ſome degree, be attributed to the indolence, timidity, or injudicious deſpondency, of regular practitioners, who, being diſappointed of their expectations from the common routine of practice, are either too indolent, or too timid, to avail themſelves of ſuch expedients as ſhall be adequate to the ſingularity or urgency of the caſe; and by precipitantly declaring patients to be incurable, before they have made every poſſible effort, force them to have recourſe to empirics, whoſe temerity being equal to their ignorance of conſequences, they *ſometimes* ſucceed by a bold uſe of remedies which, *being pilfered from regular practice*, might certainly be more ſafely and ſucceſsfully employed by men of ſkill.

purpoſes; they deemed it more eligible to convert the *miſapplication* of that power in favour of quacks, into a beneficial increaſe of the revenue. But "none (as the late "*Cheſterfield* obſerved on the gin act) ever "heard of a tax on theft or burglary, be-"cauſe a tax implied a licence;" for the ſame reaſon, quackery, being a dangerous evil, ſhould not have been taxed, but abſolutely prohibited under the moſt ſevere penalties; for vice ought not to be tolerated in a good government, but rigorouſly ſuppreſſed.

But if the College of Phyſicians had, in conſequence of the authority veſted in them, puniſhed theſe interlopers, quack medicines could not now have been an object of taxation. The practice of medicine in this kingdom is on a moſt miſerable footing; and nothing but a thorough reformation of it can remedy the manifold evils which reſult from its preſent ſtate; nor can there be an object of greater political magnitude, or more worthy of the interpoſition of the legiſlature, than the eſtabliſhment of ſuch regulations as, by confining each department of medicine to its proper province, may effectually eradicate empiriciſm.

That

That this is practicable is manifeſt from the effects of the wiſe regulations eſtabliſhed by that great princeſs the *Empreſs of Ruſſia*; by which quackery has been totally annihilated in that moſt extenſive empire; and it may juſtly be affirmed, that there are more quacks in *England* than in all the reſt of Europe.

Divinity, law, and phyſic, are juſtly deemed *learned* profeſſions, and legiſlative authority has limited the *regular* exerciſe of thoſe profeſſions to ſuch perſons *only* as are qualified by a regular education. But though the benign ſpirit of toleration has *permitted* religious empiriciſm, and *folly has countenanced medical quackery*, the courts of Weſtminſter have wiſely excluded *ignorance* from the bar.

But though no man of common ſenſe would rely on an *enthuſiaſtic cobler* for inſtruction concerning his moral and religious duties; or employ a *taylor* to defend his property in Weſtminſter-hall; yet, *ſtrange infatuation!* many perſons, not deſtitute of common ſenſe in other reſpects, daily truſt their lives and healths to *miſcreant noſtrum-mongers*, who are as little qualified to practiſe

phyſic, as a cobler is to preach, or a taylor to plead a cauſe.*

It may

* The reader will ſee this ſubject fully explained, vol. I. Eſſay II.

It has been intimated to the author, in a tone bordering on the ſupercilious, that he was guilty of miſrepreſentation, when [ſee P. 116, of this vol.] he alledged, that mandamus and honorary diplomas in phyſic were granted by the Engliſh, and *ſome* Scotiſh Univerſities, to perſons who had never ſeen them; for that at Oxford the candidates were always preſent. But admitting that a gentleman poſted down to Oxford to enjoy the conviviality of an encœnia; and having obtained his Doctor's degree, poſted back again; he might as well have been at the Cape of Good Hope, unleſs we ſuppoſe that the Regius Profeſſor could, *by the influence of animal magnetiſm*, convey to the candidate a *quantum ſuffict* of his medical ſkill. Did not the Univerſity reward the impoſture of *Price*, the alchemical gold-finder, by *ſending* him a Doctor's degree? *Pudet hæc opprobria.*

There are, it is true, ſome medical profeſſorſhips at both Univerſities, and they are very pretty ſinecures; but it is within a very few years only that any attempt has been made to erect medical ſchools there. By whom? why truly, *by gentlemen who received their medical education at Edinburgh!* and yet ſo ridiculouſly ſupercilious and faſtidious have ſome phyſicians bred at Oxford been, as to have peremptorily refuſed ſigning a preſcription with graduates of Leyden and Edinburgh: but thoſe gentlemen have ſince abated of their high pretenſions.

One of the moſt violent aſſertors of this academical ſuperiority was the late Sir *William Browne*, a corpulent man; and though then preſident of the college, almoſt as good a phyſician as he was a poet. Diſputing, one day, with a waggiſh licentiate on this ſubject; "Sir," ſaid the Baronet, "I am a member of both Univerſities." 'I doubt it not;' replied his antagoniſt: 'and I once knew two cows, which bringing calves at the ſame time, one

of

It may be proper to offer ſome remarks on the moſt important ſubject of this volume, the Eſſay on Regimen, now very much enlarged.

It is drawn up in the form of propoſitions, which though not ſo demonſtratively certain as thoſe of *Euclid*; yet, probably, as much ſo, as truths, not geometrical, will admit of.

of the calves dying, the ſurvivor ſucked both cows.' "How" rejoined the enraged preſident, "does your ſtory relate tomy pretenſions?" 'In no other reſpect,' replied the wag, 'than that, by having the benefit of both cows, *he muſt have been a very great calf indeed.*'

The author has not the moſt diſtant intention of detracting from the merit of thoſe phyſicians who have been members of either univerſity; many of them have been, and now are, deſervedly eminent; and the author has formerly had the pleaſure of profeſſional intercourſe with *one* gentleman in this line, whoſe merit, as a man and a phyſician, is above all praiſe.

But theſe gentlemen neither derived their *medical* education, nor their celebrity, from *their* univerſities; but from other ſeminaries, or their own talents and aſſiduity.

It has been ſaid that, not only in the former edition of this work, but in the work lately publiſhed, the author has, in ſeveral inſtances, indulged a ſpirit of ſarcaſm, and in others of aſperity, which may have a tendency rather to offend than reform.

It certainly was far from his intention to make "one worthy man his foe;" but, independant in his ſpirit, and *totally regardleſs of conſequences*, he has dared to utter ſome ſtrong but unpalatable truths, which a more dependant man might, from prudential motives, have choſen to decline. May ſuch, however, *in this country*, ever be the reſult of perſonal, profeſſional, and political independance, *unalloyed* by the influence of intereſt, prepoſſeſſion, or prejudice!

The Eſſay on Regimen is divided into two books; the firſt treats of diet as adapted to the preſervation of health, or the cure of diſeaſes; the ſecond book contains remarks on the other non-naturals: a ſecond table of the relative qualities of foods and drinks is now added; and the whole very much enlarged. A careful peruſal of the firſt volume will render this more intelligible, as frequent references are made to that for the purpoſe of illuſtration.

There is nothing novel in the attempt to explain regimen upon medical principles; indeed no other mode can be adopted by which the ſubject can be rendered intelligible.

Thoſe who have written treatiſes on this ſubject for popular information, as *Arbuthnot*, *M'Kenzie*, *Strother*, &c. were obliged to adopt the ſame plan; but their references to, and reaſonings upon, the ſound or diſeaſed ſtate of the body and mind, were but imperfectly underſtood by any but medical men; becauſe readers in general (a few philoſophical men excepted) were totally unqualified to comprehend thoſe principles upon which the reaſonings were founded.

The

The author has removed this ſtumbling-block, by the publication of *The Natural Hiſtory of the Human Body and Mind*, in which, by diveſting medical principles of their technical obſcurity, he flatters himſelf he has rendered the whole intelligible to every perſon who has any pretenſions to a liberal (though neither a claſſical nor philoſophical) education.

Thoſe who will probably peruſe this and the preceding volume, may be divided into different claſſes.

1*ſt*. The *learned and philoſophical readers* can find no difficulty in comprehending the principles which are conſtantly referred to; and it muſt afford them peculiar ſatisfaction to find the field of philoſophical enquiry extended, by the acceſſion of a moſt curious and intereſting branch of philoſophy, which has hitherto been ſolely appropriated by medical men.

From a more general diffuſion of medical knowledge, the happieſt effects muſt reſult to ſociety; becauſe men of learning and ſcience, now no longer excluded from a participation of this branch of philoſophy, will have no ſeparate intereſt from that of the

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art and its profeſſors; and whilſt they aſſert their right of enquiry into the principles of a ſcience on which the preſervation of life and health depends; they will deem it their duty to detect and expoſe aſſuming ignorance, and be the judges and patrons of real merit; and, by their example and authority, muſt give a deadly blow to every ſpecies of empirical pretenſion.

2*dly*. *Lady and Gentlemen-Doctors* are exceedingly numerous in this age and kingdom. Though they read diſpenſatories and practical compilations with great avidity, they are ſo far from acquiring thereby any real knowledge; that the few ideas ſuch reading affords them are deſtructive, becauſe they are empirical; and ſhould theſe eleemoſynary doctors, fraught with this kind of knowledge, undertake the office of being medical preſcribers, their beſt intentions muſt be productive of much evil. Of this ſerious truth a peruſal of this and the preceding volume will afford the moſt irreſiſtible conviction.

On the other hand, the principles of regimen are ſo much more ſimple and intelligible than thoſe of medicine, that if a lady-doctor will confine herſelf to this province, ſhe may be

be eſſentially uſeful, eſpecially as ordinary practitioners often, and phyſicians ſometimes, are more attentive to the uſe of medicine than of regimen.

Some obſervations are more peculiarly medical, which if not reliſhed by the reader, may be paſſed over: to the lady-doctors, however, long and profoundly converſant, as they muſt have been, in medical ſtudy, one objection only can occur to thoſe obſervations, that they do not afford a ſingle hint by which they may increaſe their ſtore of infallible receipts.

3*dly*. Though regimen is an object of general concern, it is peculiarly ſo to thoſe whoſe conſtitutions, being naturally delicate, may be ſaid to be perpetually on the verge of diſeaſe; ſuch are the nervous, the hypochondriacal, and the gouty invalids.

The peruſal of theſe volumes will ſtrongly impreſs on their minds two very important truths:—That by a due attention to regimen, they may avert or alleviate many of their diſtreſſes;—and that in every circumſtance reſpecting the uſe of medicine, they ought implicitly to ſubmit to the direction of men of ſkill and integrity. Gouty perſons,

ſons, eſpecially, will find ſome uſeful hints in the laſt chapters of the firſt book of regimen, which, if duly attended to, may very much contribute to mitigate, and, under certain circumſtances, even eradicate their diſeaſe.

4thly. The author flatters himſelf, that young medical men, of every denomination, may not totally miſemploy their time in the peruſal of theſe volumes; and that they may eſpecially derive ſome uſeful hints from the ſecond Eſſay of the firſt volume, and the firſt and ſecond Appendix of this.

The authors of the Monthly Review, in their criticiſm on the Philoſophical Sketch, remark, that "except that uſeful body of "men the apothecaries, on whom the author "has paſſed ſome ſtrictures, every claſs of "readers will receive entertainment as well "as information &c."

This remark ſeems to imply that there muſt be ſomething offenſive in theſe ſtrictures; but though the author of the Philoſophical Sketch has ever diſdained the uſe of thoſe arts by which phyſicians are ſometimes ſuppoſed to conciliate the favour of apothecaries; he equally abhors an indiſcriminate cenſure of any body of men.

His

His plan neceſſarily led him to offer ſome remarks on the defects of medical education; but he has expreſsly ſaid, that as a diploma cannot convert a blockhead into a ſkilful phyſician; ſo an ingenious apothecary may, by aſſiduity, become a good phyſician, though deſtitute of the credentials.

The late Dr. *Fothergill* had been apprentice to an apothecary; and though that portion of medical genius which he ſo eminently poſſeſſed, and which was depreciated only by thoſe who envied him, would have ſurmounted all difficulties, even had he remained behind a counter; yet no man will venture to aſſert, that the ordinary education of an apothecary is the beſt poſſible for the attainment of medical knowledge: *if it be not*, the phyſician has a juſt claim to that pre-eminence which he holds in the eſtimation of the public: *if it be*, the diſtinction between the phyſician and apothecary is invidious and unjuſt.

To conclude: Should the readers of theſe volumes deign to beſtow but a very trivial portion of that labour and attention with which they were compiled; it is probable they may acknowledge that they have not totally miſemployed their time.

A table of Contents, and a copious Index, will readily conduct the reader to any article of which he or ſhe may wiſh to be informed; but ſuch is the connexion between every part of the ſubject of regimen, that an attentive peruſal of the whole will be the beſt preparative to a knowledge of particular parts.

The errata of the firſt volume having been omitted, are inſerted in this.

THE author is informed that his empirical opponents, and their abettors, have, as *a coup de grace*, induſtriouſly propagated a report *that he is inſane*; and it is poſſible that even his friends may ſuſpect that all is not right with the man who could attempt the Herculean labour of cleaning the Augean ſtable of empiriciſm, or undertake the no leſs arduous taſk of reforming many other medical abuſes.

As he ſuſpects that the *Vir ſapiens, ſibique imperioſus*, is almoſt as rare a phœnomenon as a black ſwan, he will not attempt to vindicate himſelf from the allegation of the former,

former, nor obviate the ſuſpicion of the latter: for if propriety or conſiſtency of conduct were to be admitted as the only criteria of ſanity of intellects, almoſt every page of hiſtory and biography, ancient and modern, will evince how difficult it would be for nations or individuals, the governing or the governed, to eſtabliſh an indiſputable claim to *even* a very moderate portion of intellectual acumen or conſiſtency: he may therefore ſay, with Horace,

Pudor te malus urget,
Inſanos qui inter vereare inſanus haberi.

ERRATA in VOL. I.

N. B. When the Sketch of the Natural Hiſtory was publiſhed, the liſt of Errata was accidentally omitted, and it is therefore inſerted here.

Preface, p. xiv. 7th line from bottom, for *my*, read *his*.
Page 22, l. 19, f. *on* r. *of*.
30, l. 3, f. *of will* r. *of the will*.
36, l. 4, f. *in* r. *in a*.
122, note, f. *part I.* r. *Medical Cautions, Eſſay II.*
160, l. 20, f. *Eſſay III.* r. *Medical Cautions, Eſſay V.*
184, l. 10, f. *vomitting* r. *vomiting*.

187. After the firſt paragraph, add the following ſentence:

The ſeveral humours are the *natural* ſtimuli of the ſecretory and excretory organs, which ſtrain them off from the blood; but when they become morbid or faulty, as they often do, either with reſpect to quantity or quality; the diſeaſe proceeds more frequently from a depraved ſtate of the organs than of the general maſs of blood, by which they are ſupplied.

219, l. 15, f. *irregularites* r. *irregularities.*
241, l. 7, f. *compleat* r. *competent.*

251. By ſome accident this ſentence has been conſtructed in a very different manner from the author's real meaning, and is to be read as follows:——

" *Hoffman*'s Anodyne Mineral Liquor was compoſed of æther and rectified ſpirit of wine, combined with the aromatic, or, as the Pariſian Diſpenſatory terms it, the *ſweet* oil of vitriol, obtained by means of a protracted diſtillation, and he frequently ſubſtituted the dulcified ſpirits of vitriol and nitre in its place, in his preſcriptions.

" The only circumſtance that we do not know concerning this remedy, is the proportion of the aromatic oil; the Pariſian Diſpenſatory directing only a part to be added, the Wirtemberg College being of opinion that the whole was added by Dr. *Hoffman*; but even if it were not, his anodyne liquor muſt have been *ſtronger* than the common dulcified ſpirit.

264, 3d paragraph, f. *pleuriſy*, r. *inflammation of the liver*, and f. *liver* r. *lungs.*

ERRATA in MEDICAL CAUTIONS, or VOL. II.

Page 118, note, f. *commendam* r. *mandamus.*
140, 147, note, f. *Eſſay I.* r. *Vol. I.*
149, l. 21, f. *of full* r. *full of.*
157, 158, 159, 163, 172, 175, f. *Eſſay I.* r. *Vol. I. Eſſay I.*
151, f. *Eſſay I.* r. *Vol. I.*
214, 239, f. *Eſſay I.* r. *Vol. I.*
267, f. *Chap. VIII.* r. *IX.*—The error runs thro' the others.
301, l. 2, r. *facility.*
344, l. 7, f. *ancuriſm* r. *aneuriſm.*
348, l. 1, ibid.
371, l. 17, f. *cirumſtance* r. *circumſtance.*
414, l. 23, f. *who* r. *which.*
431, note, f. *viniſo* r. *vinoſo.*
432, l. 2, f. *neutralize* r. *change.*

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ESSAY

MEDICAL CAUTIONS.

ESSAY I.

On FASHIONABLE DISEASES.

And here they are all Bile and Spleen,
The ſtrangeſt Fiſh that e'er were ſeen.

Five times I've purg'd, but I'm ſorry to tell y'
I find the ſame gnawing and wind in my belly.

NEW BATH GUIDE.

FASHION, like its companion *Luxury*, may be conſidered as one of thoſe excreſcences which are attached to national improvement; and which ſo far reſemble the moſs of fruit-trees, and the miſletoe of the oak, as not to be entirely uſeleſs; though they may be occaſionally injurious.

Whilſt one part of a poliſhed nation is aſſiduouſly engaged in cultivating the arts and ſciences; another part is not leſs buſily employed in the invention and regulation of its faſhions.

As ſocieties advance in civilization, the active mind of man, not contented with the means of ſatisfying our natural wants, is anxiouſly employed in creating artificial wants, and inventing the means of their gratification.

When that ſcourge of mankind, *Louis* the XIVth, was induced by vanity and ambition to attempt univerſal empire, his ſubjects were, *pour l'honneur du grand Monarque*, not leſs ſolicitous to extend the language and faſhions of that frivolous nation; and even ſturdy *John Bull*, whilſt his armies and navies triumphed over thoſe of France, deigned to ſubmit to the influence of her faſhions.

By one of thoſe revolutions, however, which are not unfrequent in the affairs of men; whilſt France has of late preſumed to dictate to our Miniſters, ſhe has condeſcended to adopt our faſhions: manifeſt proofs of which frequently occurred to me in that country, and even in the apartments of the

firſt

firſt lady of that kingdom: How have we benefited by the exchange?

The empire of faſhion has now become univerſal: it is not confined to the decoration of our perſons, or the embelliſhment of our houſes and equipages; but extends to our politics, morals, religion, and even in ſome degree to our ſciences. Men and women of faſhion are ſupereminently diſtinguiſhed from thoſe of *no faſhion*, or *whom no-body knows*.

I do not, however, *entirely* approve of thoſe apparent diſcriminations of national character, merely becauſe they do not ſeem to anſwer the purpoſe for which they were eſtabliſhed; for whilſt people of no rank and ſlender means preſume to intrude on the province of their ſuperiors, by *faſhionably* ruining themſelves, their families, and connections; the pale of diſtinction is likewiſe thrown down by toad-eaters, ſwindlers, and gamblers, who, by keeping *the beſt company*, neceſſarily exalt themſelves to the high prerogative of being *people of faſhion*.

Should any of my faſhionable readers expreſs their ſurpriſe at meeting with a diſſertation on faſhion in a medical eſſay, my

reply is ready; that as medicine, as well as ſome other arts, is become ſubject to the empire of faſhion, there can be no impropriety in conſidering by what means this has been effected.

Faſhion has long influenced the great and opulent in the choice of their phyſicians, ſurgeons, apothecaries, and midwives; but it is not ſo obvious how it has influenced them alſo in the *choice* of their diſeaſes. This I ſhall endeavour to explain.

Patients are generally prompted by curioſity to enquire of their medical guide, what is their diſeaſe? But an explicit anſwer to the queſtion is not always either convenient or practicable; becauſe the doctor is ſometimes ignorant of it himſelf: inſtead therefore of entering on a learned diſquiſition on the ſubject, or candidly confeſſing his ignorance, which would not be always conſiſtent with good policy; he gratifies his patient by a general term, which may, or may not, be expreſſive of the nature of the diſeaſe.

If both patient and doctor are people of faſhion, this circumſtance is *alone* ſufficient to render the term faſhionable; for as people of faſhion claim an excluſive privilege of having

having always ſomething to complain of, ſo the mutual communication of their ailments is often a topic of converſation: the imagination frequently ſuggeſts a ſimilarity of diſeaſe, though none ſuch really exiſts; and thus the term becomes ſoon completely faſhionable.

In the latter end of the laſt and beginning of this century, *ſpleen*, vapours, or hyp, was the faſhionable diſeaſe.

The *Princeſs*, afterwards *Queen* ANNE, often chagrined and inſulted in her former ſtation, and perplexed and harraſſed in the latter, was frequently ſubject to depreſſion of ſpirits; for which, after the courtly phyſicians had given it a name, they proceeded to preſcribe Rawleigh's confection and pearl cordial. This circumſtance was ſufficient to transfer both the diſeaſe and the remedy to all who had the leaſt pretenſions to rank with perſons of faſhion. In proceſs of time, however, theſe faſhionable and palatable ſhop drams became by repetition too weak; and many of the patients, tired of the expence and inefficacy of the remedy, found a more ready and more powerful ſubſtitute in cloſet cordials and plain Nantz.

Upwards of thirty years ago, a treatiſe on nervous diſeaſes was publiſhed by my quondam learned and ingenious preceptor Dr. WHYTT, profeſſor of phyſick, at Edinburgh. Before the publication of this book, people of faſhion had not the leaſt idea that they had nerves; but a faſhionable apothecary of my acquaintance, having caſt his eye over the book, and having been often puzzled by the enquiries of his patients concerning the nature and cauſes of their complaints, derived from thence a hint, by which he readily cut the gordian knot—"*Madam, you are nervous!*" The ſolution was quite ſatisfactory, the term became faſhionable, and ſpleen, vapours, and hyp, were forgotten.

Some years after this, Dr. COE wrote a treatiſe on biliary concretions, which turned the tide of faſhion: nerves and nervous diſeaſes were kicked out of doors, and *bilious* became the faſhionable term. How long it will ſtand its ground, cannot be determined.

Names or terms, when improperly employed in matters of ſcience, neceſſarily create confuſion and error; but had this faſhionable term been productive of no untoward *practical* conſequences, I ſhould have conſidered

conſidered any attempt to combat the idea as unneceſſary and abſurd. But I have obſerved ſo many injurious effects from the adoption of this idea, that I think it my duty to be at ſome pains to point out the danger of it.

In my eſſay on the difficulties of ſtudying medicine, I have hinted at the impropriety of attempting to regulate the evacuations, during health, by the uſe of remedies. I remarked that it will be more ſafe to leave the conſtitution to its own efforts. In no reſpect is health more abuſed than by the abſurd practice of taking purgatives for the preſervation of health, or to remove the occaſional effects of accidental repletion, or ſlight conſtipation of the bowels.

The idea of bleeding and purging every ſpring and fall, to prevent fevers and other diſeaſes, was formerly very general in this country; owing to the ignorance or knavery of barbers and medicaſters, who derived no ſmall benefit from thus diſciplining whole pariſhes. Many of the lower ranks do ſtill ſubmit, with implicit faith, to this deſtructive practice, but it is not ſo general as it was. Another cuſtom now prevails, more injurious,

injurious, becauſe more univerſal and frequent, which is the repeated uſe of ſalts, magneſia, rhubarb, Anderſon's and James's pills, eſpecially by perſons who either labour under ſome ſlight indiſpoſition, or believe they do. Such practice tends to deſtroy the health they wiſh to preſerve, and to exaſperate the diſeaſe they are taken to remove.

Having made this general obſervation, I return to my ſubject.

From a well-grounded opinion that Bath waters are very beneficial in colics produced by gall-ſtones, and other caſes of *defective* bile, a very conſiderable proportion of the patients who reſort to this place, come with a ſtrong prepoſſeſſion that their complaints are *bilious*; inſomuch that inſtead of my patients giving me a detail of their ſymptoms, by which I may judge of the nature of the diſeaſe; the anſwer generally is, "*Doctor, I am bilious*;" and on enquiry, I find that they have generally been in the habit of taking medicines to carry off the *ſuppoſed* offenſive bile.

To point out the dangerous conſequences of indulging, and acting under, this idea, I ſhall,

ſhall, as briefly as poſſible, relate two caſes, out of many others which have occurred to me.

Some years ago a lady, daughter of an eminent phyſician, and wife to a gentleman more reſpectable from his perſonal character, than *even* by his near relation to a noble family, conſulted me on her caſe.

A late *faſhionable* phyſician, who had declined practice, ſpent ſome time at this gentleman's country-ſeat. As he had been the family phyſician, the lady conſulted him, as a friend, concerning a complaint of her ſtomach, and he preſcribed her a courſe of purging ſalts, under the idea that the caſe was bilious.

Some weeks after, I was conſulted, and found that ſhe had almoſt daily uſed theſe ſalts; but inſtead of being relieved, was much reduced, with a total loſs of appetite, and extreme oppreſſion after meals; from which very diſtreſsful ſymptom, ſhe was in ſome meaſure relieved, either by diſcharging her ſtomach, or a repetition of her purge.

I, in vain, attempted to diſſuade my patient from this deſtructive practice, and therefore adviſed that ſome other phyſician might

might be conſulted. Some difficulty having ariſen concerning the choice, copies of her caſe were ſent to three phyſicians in London. The phyſician who had been ſtrongly recommended by the friend of the family as his ſucceſſor, deſired the patient might go to town, and put herſelf under his care; but this being, on account of her weakneſs, deemed impracticable, he was prevailed on to viſit her. As we did not agree in our opinion of the caſe, I reſigned the patient totally to his direction: Purging medicines, and large quantities of the acid of lemons were ordered; and her phyſician left her with a declaration that he expected to find her out of danger in the courſe of two days, when he ſhould viſit her again: but on the morning of that day ſhe died, after having laboured for twenty-four hours under violent convulſions.

Here a trivial complaint, which might have been relieved by a few ſtomach medicines, and a courſe of Bath waters, became fatal from injudicious management in the beginning; for I was well aſſured that the diſeaſe was incurable before the lady was viſited by the laſt phyſician; who erred only

in

in his favourable prognoſtic reſpecting the iſſue of a caſe which was beyond the power of medicine: though it is probable the lady's death was precipitated by the adoption of his patron's plan.

A ſingle lady, daughter of a moſt worthy and reſpectable friend of mine, had been for many months in the habit of taking purges, with an expectation of carrying off bile; inſomuch that her ſtomach and bowels, having become, by repetition, inſenſible to the impreſſion of weaker purges, was at length obliged to have recourſe to gamboge pills, by the direction of a very eminent phyſician in London. Her health, conſiderably impaired by this practice, was farther injured by the death of an only ſiſter, and ſhe came to Bath near three years ago to conſult me.

This lady had been ſo accuſtomed to frequent purging, that ſhe experienced the moſt diſtreſsful oppreſſion and ſenſe of fullneſs at the pit of the ſtomach, when ſhe omitted the uſe of her pills for a day or two: But I having pointed out the danger of purſuing this plan, ſhe deſiſted, and from the uſe of a few warm medicines, aſſiſted by the Bath water, gradually increaſed to five of the

the largeſt glaſſes daily of the King's Bath pump, this lady left Bath much amended; and by a letter received from her lately, I underſtand that ſhe has not taken any purgative ſince, excepting a little tincture of rhubarb, once only, when indiſpoſed by colic.

Had this lady continued the uſe of theſe violent purgatives, or indeed of any, ſhe would probably have died under complaints ſimilar to thoſe mentioned in the preceding caſe; or have been deſtroyed by an inflammation of the bowels, in conſequence of their inſuperable inſenſibility to the impreſſion of neceſſary means.

The Bath water and other remedies rendered the farther uſe of purges unneceſſary, by ſtrengthening the ſtomach and bowels, and enabling them to perform their offices regularly and ſteadily.

The caſes now related afford an irrefragable proof of the dangerous conſequences of indulging in the habitual uſe of drugs, eſpecially thoſe of the purgative kind; and this often upon the moſt trivial occaſions: and I am entirely convinced that Anderſon's pills, and James's Analeptic pills, (now the faſhionable remedy,) have been more deſtructive

ſtructive to his Majeſty's ſubjects than even the havock of war.

From what I have ſaid, it is manifeſt that I cannot concur in opinion with Dr. CADOGAN, that the daily uſe of even gently opening medicines, or frequent purgatives, is at all adviſeable in the intervals of gout; and I have had ſeveral occaſions to remark very injurious conſequences from the adoption of this habit by gouty patients.

Before I proceed to aſſign my reaſons for believing that the idea of bilious diſeaſes being frequent, is founded in error, it will be proper to conſider the true meaning of the term *bilious*.

Bile is a fluid of a browniſh yellow colour, of a pungent bitter taſte, and of a ſoapy nature, ſeparated by the liver, and diſcharged into the bowels a few inches below the inferior orifice of the ſtomach; partly from the liver, and partly from the gall-bladder, which is a kind of repoſitory for the bile, where it undergoes ſome neceſſary changes.

The offices of bile are various:

1ſt. As it is highly alcaleſcent, it corrects any acid tendency the food may have acquired in the ſtomach, either from too great a proportion

a proportion of vegetable aliment, which is more or leſs of an acid nature, or from ſome defect of the digeſtive powers of the ſtomach.

2*dly*. As the humours of the body have an alcaleſcent tendency, the bile, by giving that quality to the vegetable food, confers on it ſo much of the animal nature, as to render it fit for performing the office of nutrition.

3*dly*. As many of the articles of our food are of a tough, glutinous, viſcid nature, and the digeſtive humours of the ſtomach cannot always compleatly aſſimilate them, the bile contributes by its ſoapy quality very much to compleat the neceſſary change.

4*thly*. By its pungency and ſharpneſs, it ſtimulates the ſecretory veſſels of the bowels, to diſcharge a larger proportion of the digeſtive humours for the purpoſe of diluting and aſſimilating the vegetable food: it alſo by the ſame power excites the abſorbent veſſels or lacteals to abſorb the fluid nouriſhment or *chyle*, and carry it into the circulation.

5*thly*. It excites the bowels to that neceſſary degree of motion, by which its diſcharges are regularly performed.

Bile may be ſaid to be either too abundant, too ſharp and alcaleſcent, or the reverſe; that

that is, too ſcanty, or not ſufficiently pungent; and one or other of thoſe conditions muſt take place in any diſeaſe, which is commonly called *bilious*; though I think very improperly, in every caſe where it is deficient. In hot climates, and even during the ſultry weather of our ſummers, the bile may be too ſharp and alcaleſcent, and therefore offenſive to the ſtomach and bowels: But perſons moſt ſubject to thoſe complaints, are chiefly the ſtrong, athletic, and laborious; who are much expoſed to the heat of the ſun, ſuch as ſoldiers, ſeamen, and day-labourers, whoſe conſtitutions being firm and athletic, their vital and circulating powers ſtrong and vigorous, their humours, eſpecially the bile, have a ſtrong alcaleſcent tendency: but even in thoſe perſons, I know from experience, that the bile diſcharged is more frequently an effect than a cauſe of diſeaſe; for though the natural pungency of the bile may be exaſperated by exceſs of heat in fevers, eſpecially in perſons of this habit of body; yet as ſoon as the fever ceaſes, the bile, ſo far from being either too abundant or too acrid, is generally deficient in both reſpects, and continues to be ſo until the patient recovers his health

health and ſtrength. That ſallowneſs and duſkineſs of complexion, therefore, which we remark in the countenances of perſons recovering from intermittent fevers and agues, and alſo in chronic diſeaſes, and which is often termed *bilious*; is owing to a cauſe with which bile is very little, if at all connected, any otherwiſe than in conſequence of its deficiency, which, in the language of common ſenſe, cannot be called *bilious*.

Perſons of relaxed, delicate, and irritable habits (and ſuch generally are the perſons of rank and fortune who ſeem to have monopoliſed the term) are ſo far from being affected by exceſs of the bile, that the very reverſe is the caſe; becauſe from the weakneſs of their vital powers, the languor of their circulation, and conſequently the poor and watery ſtate of their blood, the ſecreted humours, the *bile* eſpecially, are much leſs alcaleſcent and pungent than they ought to be.

The bile is often more deficient in quantity and pungency than the reverſe; and this is frequently the reſult of that indolence of life and relaxation of habit, moſt frequently to be met with in the wealthy; and is often accompanied by a train of nervous ſymptoms;

toms; though there is no doubt but perſons in the inferior ranks of life, who are reduced by indigence, improper diet, or diſeaſe, may alſo labour under this defect of the bile. But without inſiſting on the impropriety of applying the term *bilious* under theſe circumſtances, it will be ſufficient to obſerve, that in ſuch caſes all the remedies directed, are ſuch as are intended to increaſe the quantity and ſharpneſs of this humour: Hence the late celebrated Dr. BOERHAAVE preſcribed ox's gall and other bitters in ſuch caſes, as ſubſtitutes to the bile; when they produce a double effect, not only by neutralizing the ſharp acid generated in weak ſtomachs, which bitters always do; but alſo by rendering the digeſtive humours more alcaleſcent and pungent.

Jaundice, or a bilious tinge of the ſkin, is conſidered as a ſufficient proof of an exceſs of bile; and many patients, eſpecially the ladies, are very much in the habit of conſulting their friends and their doctors, concerning the colour of their eyes; and by the aid of a depraved imagination, often detect bile as a cauſe where it does not exiſt. Thus, when a lady, having ſpent many

hours at a rout, almoſt ſuffocated by the hot and tainted air of a ſmall crouded room, is thrown into a temporary fever, and awakes unrefreſhed and diſtreſſed; perhaps not in a very good humour, from a bad run at cards the preceding night; upon conſulting her glaſs, finds her complexion not ſo clear as the preceding day; but unwilling to attribute it to the real cauſe, finds in the bile a more convenient ſubject of blame.

Jaundice, however, is rarely the conſequence of exceſs of bile, but of its deficiency, and only ſhews that it has, by a variety of cauſes, been diverted from its natural courſe. But here the means of relief are ſuch as may be beneficial in reſtoring it to its uſual channel, and increaſing its quantity and pungency; and not ſuch as may diſcharge it as abundant or offenſive: therefore, this does not deſerve, ſtrictly ſpeaking, the name of a bilious diſeaſe, any more than a dropſy neceſſarily implies an exceſs of the thinner parts of the blood.

A bilious tinge of the ſkin is not unfrequently the accidental effect of violent anger, the bite of the viper, poiſons, agues, and of nervous or ſpaſmodic colics, owing to the natural

natural paſſages of the bile being ſo blocked up by a temporary conſtriction, that it is diffuſed over the ſurface. This I have more than once obſerved in patients exquiſitely nervous, and in whom there was not the leaſt reaſon to ſuſpect either abundance of bile, or gall-ſtones. In theſe caſes, the ſkin and whites of the eyes have loſt the yellow tinge, when, the ſpaſm being removed, the bile returned into its natural courſe. A doſe of camphor or opium effected a cure; whilſt a purge, given in this ſtate of the organs, would have increaſed the yellowneſs.

But there are many diſeaſes accompanied with a ſallowneſs of complexion, often miſtaken for a jaundiced tinge; and this is ſometimes the caſe in perſons who labour under a complication of nervous and hypochondriacal ſymptoms, not unfrequently connected with ill-formed gout: ſuch perſons, under the idea of being bilious, are often too buſy with purgatives, for the abſurd purpoſe of carrying off a cauſe which does not exiſt; and thereby exaſperate all their complaints.

Gall-ſtones, as they are commonly called, are formed by the bile contained in the gall-

bladder becoming gradually ſo congealed as to acquire the conſiſtence of yellow wax. This is not ſo frequent a diſeaſe as is generally imagined; but it is eaſily diſtinguiſhed from what are commonly, but falſely, called *bilious* caſes, from the exquiſite and intolerable pains at the pit of the ſtomach; whilſt the gall-ſtones block up the paſſage from the gall-bladder. But this terrible evil is not always accompanied with a bilious tinge of the ſkin, which is indeed often accidental, and unconnected with any fault of the bile.

Even diſeaſes of the liver itſelf, the organ which prepares this humour, do not, ſtrictly ſpeaking, deſerve the name of *bilious*; for yellowneſs of the ſkin, or a diſcharge of bile, are only accidental circumſtances; and ſome of the moſt inveterate diſeaſes of this organ take place without either.

A bitter taſte of the mouth, a browniſh liſt on the tongue, a ſickneſs and ſenſe of oppreſſion at the pit of the ſtomach, are ſuppoſed to be undoubted proofs of offenſive bile in the ſtomach; eſpecially if bile be diſcharged by vomiting: but if we conſider the unnatural medley of foods which are ſwallowed by the rich and luxurious, we may readily

readily account for theſe ſymptoms, without attributing them to the bile; which, had it really exiſted in the ſtomach, would rather have prevented, by its aſſimilating quality, thoſe unnatural ferments, than have promoted them; and indeed this is ſuppoſed to be its peculiar office, after the food is diſcharged into the bowels.

With reſpect to the ſuppoſed *unequivocal* proof of an offenſive ſtate of the bile, from its being diſcharged by vomit, this circumſtance merits a diſtinct and more minute conſideration.

Though ſome phyſicians have alledged that bile is always preſent in the ſtomach, and that it is indiſpenſibly neceſſary to the digeſtion of the food; yet the majority have doubted, and even denied the fact; and ſome experiments made on brutes, with an expreſs intention to aſcertain the nature of digeſtion, ſeem to contradict it. If bile ever arrives at the ſtomach, it muſt be by a perverted and retrograde motion of the bowels, and contrary to gravity; which, in the ſimplicity of the operations of nature, cannot readily be admitted; for if the wiſe Author of our being had intended that the bile ſhould

be depoſited in the ſtomach, it might eaſily have been conveyed directly thither, as, it is ſaid, was found to be the caſe on the diſſection of a man who had been remarkable for a moſt voracious appetite, owing, as it was ſuppoſed, to the bile being conveyed thither directly by a duct.

Some of my patients have aſked me how bile ſhould be diſcharged from the ſtomach, if it were not depoſited there. The anſwer is eaſy. The ſenſation of ſickneſs, if it be ſevere and permanent, promotes a regurgitation of bile into the ſtomach, by inverting the periſtaltic motion of that bowel or inteſtine which is connected with the ſtomach: and hence it ſometimes happens, that when the ſtomach is empty, pure bile is diſcharged by the firſt effort; but this is no evidence of its being the offenſive cauſe of the vomiting, but an accidental effect; neither is a copious diſcharge of bile any evidence of its being in a diſeaſed ſtate.

The moſt healthy perſon on going to ſea, when he becomes ſick, diſcharges, after various efforts, a great quantity of bile, and this for days ſucceſſively: but ſhall we from thence infer that his bile is abundant or acrid?

acrid? A man in high health receives a blow on his head, by which his brain is injured; he throws up green bile: are we to ſuppoſe that the bile therefore is in fault? Perſons ſubject to nervous head-achs often diſcharge bile; but the effect is accidental, and is in no reſpect connected with a fault of this humour. Perſons, the tone of whoſe ſtomachs is much impaired by intemperance, and other cauſes, after a ſevere fit of heart-burn, diſcharge the contents of the ſtomach ſo extremely ſour, as even to corrode the throat. After a few efforts, the matter thrown up is green: this alſo is attributed to bile; though in truth, if this bile had been conſtantly preſent in the ſtomach, it would have neutralized and corrected this ſharp acid; as we know that ox gall mixed with acids has this effect.

That bile rarely, if ever, paſſes into the ſtomach, unleſs after ſeveral efforts of vomiting, is evident, becauſe as ſoon as it is pumped up, the ſickneſs becomes much more ſevere and diſtreſſing; owing to its unnatural ſtimulus on the nerves of the ſtomach; which had it been a natural and conſtant gueſt there, would not have been the caſe.

To conclude, The idea of bile being a predominant cauſe of diſeaſe, is a groſs and vulgar error; and in its conſequences a very injurious one; and I can, from long and extenſive experience, aver, that thoſe evils which have been attributed to its exceſs, have generally reſulted from its deficiency; and that the idea of carrying off this moſt uſeful and ſalutary humour, when it is already too ſcanty, has been often productive of the moſt dangerous and fatal conſequences.

N. B. In the Greek language, the ſame term is uſed to expreſs bile and anger; hence the word *choleric* is applied to perſons of a violent, iraſcible, and reſentful diſpoſition. Were the Britiſh Fair, eſpecially the *Faſhionable*, (whoſe poliſhed education has a manifeſt tendency to regulate, if not almoſt totally annihilate, all the tumultuous paſſions) apprized of this circumſtance, they could not poſſibly conceive that any of their bodily or mental evils originated from, or were connected with, an exceſs of *gall* or *bile*; and inſtead of continuing to adopt it as a *faſhionable diſeaſe*, they would reſign it to the *nymphs* of St. Giles's and Billingſgate.

ESSAY

ESSAY II.

The DANGEROUS EFFECTS *of* HOT *and* CROUDED ROOMS.*

CHAP. I.

FIRE is an element, the nature of which, notwithſtanding the numerous experiments and painful reſearches of philoſophers and chymiſts, is but imperfectly underſtood. It is the moſt univerſal principle, and the moſt powerful agent, in nature; as it pervades all bodies, and reſides in a certain degree even in the coldeſt: heat and flame being only effects of its activity, and cold of its quieſcent ſtate in thoſe bodies.

When united with the principle of inflammability, which reſides in many bodies, thoſe bodies, when fire acts upon them, burſt out into flame; and this flame is ſupported by the external air: which is alſo ſuppoſed to enter copiouſly into the ſubſtance of thoſe bodies during their ſtate of combuſtion.

* See Natural Hiſtory of the Human Body, book iii. chap. 1, on *Reſpiration*, which will explain the ſubject of this chapter.

Though

Though all bodies in nature are not ſuſceptible of flame, yet all are of heat, in various degrees, generally in proportion to their denſity.

The effects of heat on animal bodies are in proportion to its degree, and perhaps of ſome other circumſtances not yet well aſcertained. In a moderate degree it creates an agreeable ſenſation in the parts with which it comes in contact, quickens the circulation of the blood, and increaſes the ſenſibility of the body. In a degree equal to, or above the heat of the body, it firſt excites and increaſes the powers of the circulation; but ultimately weakens and depreſſes them: Hence it is that bakers, blackſmiths, manufacturers of glaſs, &c. are oppreſſed, and eventually much weakened, by the heat of their furnaces, &c. and we know that exceſs of heat *alone* produces dangerous and often fatal fevers; and that, when the impreſſions of cold immediately ſucceed thoſe of heat, a variety of diſeaſes are produced, according to the degrees of each, and other circumſtances.

This ſubject will be conſidered more fully in the next chapter.

CHAP.

CHAP. II.

Effects *of* Noxious Air.

THIS term, when applied to air, implies, that it is injurious to animal life. The maſs of air which ſurrounds this globe to a conſiderable height, and which is called the atmoſphere, ſeems to be a compound of pure air blended with a very large proportion of exhalations from animals, vegetables, minerals, and metals, a conſiderable portion of which probably conſiſts of fixible, inflammable, and other factitious airs, and electric fire; and therefore muſt be more or leſs impure in proportion to the nature and degree of theſe exhalations.

As we are conſtantly and neceſſarily receiving a column of this air into our lungs, for the ſupport of life, it is of conſiderable importance that it ſhould be as free from impurity as poſſible, (for impure it always is in ſome degree) becauſe, when highly contaminated, it is fatal; as is evident from the effects of burning charcoal, experiments with the air-pump, &c.

The

The effects of impure air on the body are various, according to the degree of its impurity. The perſon who remains for ſome time in foul air becomes uneaſy and languid, with head-ach, difficulty of breathing, ſenſe of oppreſſion about the heart, cold ſweat, fainting, &c.

Theſe effects ſhew that the lungs are unable to admit or diſcharge the air with their uſual freedom; that the powers of the heart and circulation are weakened; the energy of the nervous ſyſtem depreſſed and almoſt ſuſpended; and that life will ſoon be totally extinguiſhed.

It may now be proper to enquire what are the chief cauſes of theſe effects; that we may avoid, or in ſome meaſure counteract them.

1ſt. *Heat* in exceſs is the cauſe of much inconvenience and danger, as has been remarked in the preceding chapter, even when it is not combined with any other noxious qualities. In no city or quarter of the kingdom are theſe evils ſo frequently or ſeverely felt as at Bath; ſurrounded as it is by hills, the incumbent atmoſphere is rendered more warm and moiſt by the ſteams from the hot baths, and the ſmoke from the numerous fires.

fires. This atmoſphere is more ſtagnant, or leſs frequently changed here than in cities ſituated on plains or elevated places, and when changed, it is but partially ſo; the colder and heavier air ruſhing into and through the ſtreets, in eddies, eſpecially from the weſt and northern points: hence it is a general complaint that Bath is more windy than any other place.

This city being much reſorted to, moſt of the houſes are occupied by ſtrangers; ſo that conſtant fires in almoſt every apartment, render the houſes exceedingly hot; as is evident from the heat of the party walls, which is ſometimes almoſt intolerable in bed-chambers, eſpecially if the beds are placed near thoſe walls.

The public rooms, though lofty and ſpacious, are nevertheleſs rendered very hot by the numerous fires, and the great number of candles; but eſpecially by the croud of people who reſort to them: but the evil is much increaſed by the frequency of private routs, where ſmall rooms are filled by a croud of perſons.[a]

Hence

[a] It has been to me matter of great ſurpriſe, that in this city, where the public rooms are ſo commodious, people of faſhion ſhould

Hence it is that ſtrangers almoſt generally complain of having caught cold on their coming to Bath; and invalids are not only thereby interrupted in the uſe of the waters, but their healths are much impaired; and coughs, rheumatiſms, and fevers, are ſuperadded to their other maladies.

Theſe evils are not obviated by the uſe of chairs or other carriages. The common chairs, ſoaked by the rains and night-dews, to which they are perpetually expoſed, inſtead of affording a proper defence againſt the outward air, contribute rather to increaſe

ſhould countenance private meetings or routs, not only to the injury of the public inſtitutions, but manifeſtly, of their own healths. Some wags have occaſionally related ſuch circumſtances of the ludicrous and laughable diſtreſſes which have occurred at thoſe meetings, as would have afforded our late *Ariſtophanes* ample materials for a farce: It is my duty to attend *ſolely* to the very *ſerious* conſequences which reſult from ſuch meetings.

In London, the practice of giving routs is more warrantable, not only becauſe there are few, if any, public card-rooms; but the private apartments are much more *ſpacious* and airy than our dining-rooms and parlours here; not to mention the bed-chambers, cloſets, and *cupboards*, into which the company are crammed.

Of late another abſurd practice has taken place, the invitation of large parties to private balls and ſuppers; where though much expence is incurred by the entertainer, and great inconvenience ſuſtained by the neighbourhood, ſuch meetings are generally a continued ſcene of tumult and confuſion, and ſuch invalids as are ſo imprudent as to frequent them, ſuffer exceedingly.

the

the evil; nor are gentlemen's carriages much leſs inconvenient; for beſides their being expoſed in open ſheds, where not only the leather but the lining muſt unavoidably attract and retain damps; perſons who paſs from a hot room, through cold and long paſſages, into the open air, and from thence to their carriages, are ſubject to be *inſtantaneouſly* chilled by the ſudden tranſition from ſuffocating heat to piercing cold.

2dly. *Tainted or impure Air.*

To the philoſophical experiments and reſearches of the very ingenious Dr. PRIESTLEY, employed in diſcovering the nature and properties of factitious airs, we are much indebted for a more accurate knowledge of the qualities, and relative degrees of purity, of the atmoſpheric air.

This air, of which it is ſaid not above one-third is really pure, is a very heterogeneous maſs, the greateſt proportion of which is really inimical to animal life.

Beſide this general ſource of contamination, the breath and perſpiration of the human body taint the air we breathe ſo much, that

that it is generally ſuppoſed that each perſon deſtroys the vivifying principle of a gallon of air in a minute; and hence the neceſſity of frequently ventilating and renewing the air of our apartments, eſpecially if ſmall and crouded.

Of the dangerous and even fatal effects of ſtagnant and tainted air, many inſtances are recorded. Not to mention the memorable inſtance of the *black hole* at Calcutta, others occurred ſome years ago at the aſſizes at Oxford, in the aſſembly-room at Edinburgh; and about four years ago, in London; ſome circumſtances of which merit the attention of the reader:

Eighteen charity children and a ſervant lay in an apartment of a houſe in King-ſtreet, Golden-Square: to render the room warmer, they ſhut up the chimney, and uſed every other means to exclude the cold air. Ten of the children, and the ſervant, were ſeized with ſymptoms nearly ſimilar, viz. excruciating pain in the pit of the ſtomach, and in the back, violent head-ach, light headedneſs, and convulſions.

In all theſe inſtances the air became ſo foul, as to threaten immediate deſtruction.

But

But foul air does not only weaken the ſprings of life, but generates the moſt malignant and contagious diſeaſes.[b]

Hence it is, that in the cloſe and damp cells of our county jails, the air is ſo noxious as to engender a malignant fever, to ſuch a degree, that for one convict that is executed, three die of the jail diſtemper. It is for this reaſon alſo, that unleſs hoſpitals are very judiciouſly conſtructed, and conſtantly ventilated, a much ſmaller proportion of the patients recover, than of thoſe who occupy ſeparate apartments in private houſes.

But independently of theſe and many other well-vouched facts, a ſimple experiment will afford a poſitive proof of what is now alledged.

The moſt neat and delicate perſon, after having paſſed the night in his bed-chamber, does not, when he awakes, diſcover any offenſive ſmell in his room: but if he quits it for a few minutes, and returns to it, after having been in the open air, and before freſh

[b] A philoſophical critic may alledge that I here confound the ordinary contamination of the air with ſpecific contagion; but in a treatiſe of this kind, accurate diſcrimination is not neceſſary.

air has been admitted, he will quickly diſcern an eſſential difference.

The ſame happens in public and crouded rooms; but as the offenſive impreſſion may be partly attributed to the blended effluvia from the fires, lights, and perfumes, (the latter of which by the bye are not very ſalutary) the experiment would not be ſo deciſive.

If theſe evils ariſe from ſtagnant air in apartments frequented by the opulent, nice, and elegant, who have the means and diſpoſition to promote neatneſs and cleanlineſs; how much more injurious muſt ſtagnant air be in the hovels of the indigent, who are deſtitute of all the conveniences, and many of the neceſſaries of life!

The effects of foul air are ſo much the more dangerous, as they do not always manifeſt themſelves immediately in the form of diſeaſe; ſo that when they do, the diſorder is rarely attributed to the right cauſe.

I ſhall endeavour to explain, as briefly and intelligibly as poſſible, the reaſon why the effluvia from human bodies are ſo injurious; as ſuch explanation will point out the means of leſſening, though perhaps not totally obviating the evil.

It has been already remarked in a former eſſay,[c] that many of the organs which compoſe our wonderfully complicated frame are employed in diſcharging particles of our food, or of the conſtituent parts of our bodies, which by the various exerciſe of its functions are become uſeleſs; and if retained, eſpecially the inflammable air and alcaleſcent particles, would neceſſarily become very noxious, and the cauſes of many diſeaſes. Many of thoſe diſcharges, eſpecially from the ſurface of the body, and from the lungs, are, even in the moſt healthy and delicate perſons, in a ſtate not very remote from putrefaction; but in perſons labouring under diſeaſe, they are of a ſtill more noxious nature; and hence two hints are ſuggeſted, viz. that perſons in health are *not* benefited by ſleeping in the ſame bed with invalids; and that it is peculiarly neceſſary to have the apartments of the ſick well aired and ventilated; and their apparel, eſpecially their linen, frequently changed.

It is ſuppoſed, and I believe juſtly, that more of the offenſive particles of our bodies

[c] Natural Hiſtory of the Human Body, &c.

are ſwept off by the air received into the lungs, than from the whole ſurface of the body beſides; and this is the reaſon why the air we breathe is ſo ſoon contaminated, and rendered unfit for the ſupport of life; and this in proportion to the air being leſs pure previouſly to its being inſpired; becauſe, thus tainted, it is ſooner ſaturated with the noxious matter it takes up in the air cells of the lungs, and therefore carries off a ſmaller proportion in a given time: whereas a purer air would unite with, ſuſpend, and diſcharge a larger quantity, and thereby prevent the dangerous effects of their retention. Hence it is that a moderately cold and dry air is the moſt wholſome.

There is another ſource of tainted or impure air, (beſides many others which I ſhall not enumerate) viz. burning fuel of every kind.

That charcoal taints the air, has long been known to medical men; but it has not been ſo generally ſuſpected, that candles, lamps, wood, turf, and coal fires, foul the air of the apartments in which they are burned.

An

An eminent and very ingenious phyſician of this city[d] has, by applying Dr. PRIESTLEY's teſt, found that the fumes of burning wood taint the air more than thoſe of coal, and charcoal more than either; and that the ſmoke of tallow candles is more injurious than that of wax or ſpermaceti.

A ſingle candle is ſuppoſed to conſume a gallon of air in a minute; and therefore a great number of candles burning even in a ſpacious apartment, muſt deſtroy the viviſying principle of a very large column of air in a very ſhort ſpace of time, not only by conſumption, but contamination.

That gentleman diſcovered alſo that the human breath tainted the air more conſiderably in the afternoon, than in the morning: but that the effects of different kinds of paint, and of flowers, on applying the teſt, were leſs apparent than might have been expected, conſidering how noxious both are to the human body.

Fire has, in general, been deemed a purifier of air, and under certain circumſtances it may be ſo in a relative degree; as, by diſſipating the moiſture of cold and damp

[d] Dr. FALCONER.

places,

places, and by rarefying the column of air within its influence, it may favour the admiſſion of colder and denſer air.

When *Hippocrates* was conſulted concerning the beſt means of preventing the propagation of a contagious diſeaſe (perhaps the plague) which infeſted a part of Greece; he adviſed that large fires might be made in a narrow paſs formed by adjoining mountains, for the purpoſe of purifying the air. But it is to be doubted how far the expedient would avail; as the rarefaction produced by the heat would as readily favour a torrent of infected air from one quarter, as of purer air from the other.

Burning bodies certainly abſorb a large quantity of the ſurrounding atmoſphere, and it is to be ſuppoſed the pureſt, as that is a more ſuitable pabulum; but it is equally certain, that they alſo throw off a very large portion of inflammable vapour, by which the atmoſpheric air is tainted: So that fires and all other burning bodies injure the air, not only by conſuming the purer part, but by throwing off foul air.

From what has been ſaid, it appears that a variety of circumſtances conſpire, even in our

our habitations and apartments, to weaken, and almoſt inſenſibly undermine the ſprings of life; but in public meetings and private routs, the evils ariſing from large fires, numerous lights, and crouded rooms, are proportionably increaſed.

A circumſtance which occurred about three years ago, firſt induced me to offer my opinion on this ſubject.

A young lively woman, who came hither to put herſelf under my care, gave a rout, and inſiſted I ſhould be of the party. The room was ſmall, and the company very numerous. We had not been long ſeated at the card tables, before a young man, my partner, after having undergone various changes of countenance, fell into a ſwoon. The doors were thrown open to afford him freſh air, and my patient, who was a delicate invalid, was much injured by the ſudden expoſure to the current of cold air. How the reſt of the company were affected, I had not an opportunity of knowing; but my own feelings and ſufferings for many hours after I retired, convinced me of the dangerous conſequences of ſuch meetings.

On

On declaring, a few days after, to one of my brethren, a man of humour, my reſolution of writing a bitter Philippic againſt routs; he archly replied, "Let them alone, "Doctor, how otherwiſe ſhould *twenty-ſix* "phyſicians ſubſiſt in this place?"

From ſome experiments made, if I recollect aright, by Dr. LETTSOM, on the atmoſpheric vapour of London, collected and condenſed, it was found to contain ſuch a proportion of noxious impregnations, as might reaſonably appear to be a great ſource of the putrid fevers which are prevalent in that great city; and as all cities and towns are, in proportion to their extent, productive of ſimilar exhalations; this circumſtance affords one reaſon why cities are more ſubject to epidemic diſeaſes than the country; and it appears from the bills of mortality, that the proportion of deaths is generally one third greater in the former than the latter. But if to this general cauſe we add the effects of hot and crouded rooms, in which faſhionable perſons paſs many hours almoſt every night, the injurious effects muſt be very great.

I proceed

I proceed now to point out the means by which theſe evils are to be obviated.

It may be laid down as a ſelf-evident propoſition, that as the extremes of heat and cold are very injurious to the human frame, eſpecially if they rapidly ſucceed each other; ſo it is incumbent on thoſe who wiſh to preſerve health, to endeavour to eſtabliſh ſuch an equality in the temperature of the air they breathe, as to avoid an exceſs of either.

The public rooms of this city, though very ſpacious and lofty, are, however, ſo heated by fires, lights, and a croud of company, as to be very injurious to thoſe who frequent them.

On the ball nights one door of the ball-room is generally left open, and the chimneys afford a vent, in ſome degree, to the foul and rarefied air. But this is not ſufficient, as is manifeſt to the feelings of every perſon on paſſing into them from the outer rooms. Thoſe who frequent the card rooms have not even the benefit of an open door, unleſs when perſons paſs and repaſs, when the cold air ruſhing in by ſtarts and intervals, is more hurtful than beneficial.

I would

I would therefore propoſe that the caſements of all public rooms, and indeed of private houſes, ſhall be ſo conſtructed, as that the upper diviſion ſhall ſlide down, and that a certain portion of them, according as the room is more or leſs crouded, be always kept open. By thus promoting a free and conſtant circulation of air in every apartment, whether occupied or not, the internal and external air become nearly of equal temperature; the foul air which is generated in cloſe unoccupied chambers, and which adheres to the walls and furniture, will be carried off before it is accumulated, and the uſual practice of airing rooms, by opening the windows, and warming them with fires, will be leſs, if at all neceſſary.

But without altering the conſtruction of the ſaſh, the heat of the ſitting rooms may be ſafely moderated, and the air corrected, by raiſing a part of the ſaſh moſt diſtant from the fire, and dropping the curtain before it. This expedient will be more neceſſary after dinner, when the air of the room has been tainted by the ſteams of the foods: or, as perſons in this country ſit ſome hours after dinner, it may be proper to retire into another

other apartment immediately after the diſhes are removed.

The opening of the windows being, even in private houſes, much above the level of our bodies, obviates the objection of its being injurious, by expoſing us to a current of air.

But the truth is, that unleſs the wind ſets ſtrongly from the quarter oppoſite to the open windows, the rarefied and foul air, ruſhing through thoſe apertures, counteracts and reſiſts the column of cold air. This is evident from a ſimple experiment. Apply a burning candle to the upper crevice of the door of a heated room, the flame will tend outwards; if to the bottom crevice, inwards; a proof that whilſt the heated and foul air ruſhes out at the upper crevice, the colder and purer air enters below. Hence the impropriety of double doors, linings, liſtings, and ſand-bags, all of which, by preventing ſome degree of ventilation, contribute to the evil which I wiſh to obviate.

A thermometer placed in public rooms, and the ſitting rooms of private houſes, would regulate the degree of heat, which in the winter ought rarely to exceed 58 or 60 degrees of *Farenheit*'s thermometer; whereas when

when this teſt is applied in heated and crouded rooms, it is found to exceed it conſiderably.

To preſerve the healths and amend or confirm the conſtitutions of the riſing generation, is certainly an object of great importance: Therefore, ſchool-rooms and bed-chambers, where a number of young perſons are crouded together, ought not only to be ſpacious, but well ventilated.

I have been induced to make this remark, by a very recent inſtance in this city of the dangerous effects of neglecting this precaution; and do moſt earneſtly recommend to the maſters and miſtreſſes of boarding-ſchools, a due attention to this circumſtance; and to parents, that they enquire into the manner in which their children are accommodated in this reſpect. The ſame precaution is neceſſary with regard to nurſeries; eſpecially as ſervants are, in general, both from habit and prejudice, fond of hot and cloſe apartments.

A lady of this city, who conſulted me, had the caſements of her apartments altered in the manner I have ſuggeſted; and has been benefited by the experiment.

It

It is obvious, that by these expedients for regulating the heat of the rooms, we should not only breathe a purer air, but, in a great measure, avoid the dangerous consequences of rushing from heated rooms into cold air; the difference being, in frosty weather, often between 50 and 60 degrees.

All persons, but especially invalids, when they go into a close room from the open air, ought not to approach the fire immediately; but if cold, bring themselves gradually to the temperature of the air of the room, which ought rarely to exceed 60. If, from inspecting the thermometer, which ought to hang at some distance from the fire, it is found to be considerably higher, the fire ought to be lessened, or more of the upper sashes opened. By such precaution, they will not only avoid the debilitating effects of a sudden transition from extreme cold to great heat, but be less affected by the foul air thrown off by the burning fuel. For this reason I am, from what I remarked in traversing the continents of Europe and America, convinced, that stoves are preferable to open grates, not only because they diffuse the heat more equally; but carry off the

the inflammable air extricated by the fire: Thoſe which are conſtructed by Mr. SHARP, an ingenious tradeſman in London, are much preferable to thoſe which I have met with abroad: The ſmall expence of fuel is a conſideration which merits attention.

I ſhall cloſe this chapter with ſome remarks on our ſleeping apartments.

If we allow only eight hours in the twenty-four to ſleep; though many perſons, eſpecially invalids, ſpend many more hours in their bed-chambers, we ſhall find that during more than one-third of our time, we breathe the ſame ſtagnant impure air, highly impregnated with noxious effluvia.

Thoſe who have not experienced the benefits reſulting from the expedients I ſhall propoſe, are not conſcious of the evils which proceed from ſleeping in confined and ſmall bed-chambers. But from the inſtances of the fatal effects of air contaminated in a high degree, already mentioned, there is the ſtrongeſt preſumption that in a lower degree, the effects, though more inſidious, muſt nevertheleſs be very injurious.

The great and good Dr. HALES, whoſe ſtudies and experiments were conſtantly directed

directed to the benefit of mankind, recommended a trial of his ventilators in the Savoy and Newgate priſons, in both of which malignant fevers were frequent and fatal: The good effects exceeded the moſt ſanguine expectations; for a very ſmall proportion of the ſick died after the uſe of the ventilators, and a conſtant circulation of air being thereby procured, the contagion ſeems to have been totally extinguiſhed.

The ventilation of our ſhips of war and tranſports, on a ſimilar principle, has contributed to render them more healthy, and to abate the violence, and leſſen the frequency, of that deſtructive diſeaſe the ſea-ſcurvy.

The worthy and benevolent Mr. HOWARD found that the jails on the continent were entirely free from malignant fever, owing to the apartments in which the priſoners were confined being ſpacious, and conſequently well ventilated.

Theſe circumſtances ſtrongly confirm the benefit to be derived from the expedients I have propoſed; which are only different modes of ventilation; and it may be farther remarked as a collateral proof, that we feel

ourſelves

ourſelves lively and alert in a pure air; and Dr. PRIESTLEY tells us, that his feelings and breathing were remarkably pleaſant when he breathed that kind of factitious air which he calls dephlogiſticated, and which is much purer than the common atmoſpheric air: The inference is obvious.

I would therefore, not only from long perſonal experience, but from the information of others to whom I have recommended it, adviſe, that not only invalids, but perſons in health, admit a free circulation of air in their bed-chambers, by various ways, and in different degrees, according to the ſeaſon of the year and other circumſtances.

During the warm cloſe weather of the ſummer and autumnal months, the chamber door may be left open for a few nights; afterwards a part of the ſaſh may be left open; but the current of air intercepted by the ſhutter: and as the perſon becomes more habituated to free air, the ſhutter alſo may be left open, and the current prevented by dropping a window curtain before it.

In the colder months, a window in an adjoining apartment may be left open, as alſo the door of communication; opening or cloſing

cloſing the ſhutter, according as the wind does, or does not, blow directly from that quarter. Chimney boards, as very great impediments to a free circulation, ought never to be admitted in any apartment.

Thick curtains cloſely drawn around the bed are very injurious; becauſe they not only confine the effluvia thrown off from our bodies whilſt in bed, but intercept the current of pure air.

It may be objected, that by the admiſſion of cold air, perſons, eſpecially invalids, would be apt to *catch cold*, as it is commonly called: but ſo far from this being the caſe, I aver, that diſeaſes from this cauſe generally proceed from perſons being expoſed to cold after being previouſly much heated: and ſo far is exceſſive warmth from being conducive to the cure of colds, and their many dangerous conſequences, that they are always exaſperated by hot cloſe apartments, and hot regimen; and therefore the beſt means of preventing diſeaſes from cold, is to avoid the contrary extreme.

Thoſe perſons who have a window open in the bed-chamber, or an adjoining apartment, need not be under any apprehenſion

of ſuffering by a current of air being immediately directed upon them whilſt in bed; becauſe, if the upper ſaſh be open, the current will be conſiderably above the level of the bed; but if the lower ſaſh be open, it will be prudent to draw ſo much of the bed-curtain as to prevent the wind from blowing upon the perſon in bed. But the danger of catching cold from ſuch current is more apparent than real; for if the head and body be properly covered, there is no hazard; and one advantage of thus admitting air is, that perſons who are in the habit of lying very warm, will by this expedient find themſelves much leſs oppreſſed and heated by a load of bed-clothes; as the lungs, like the funnel of a ſtove, diſcharge the heated and foul air by means of the cool air admitted by every inſpiration.

It may alſo be alledged, that, from the experiments of Dr. INGENHOUZ, night air is noxious; as vegetables in a growing ſtate throw off, in the ſhade, a great quantity of noxious air. But allowing the reſult of theſe experiments to be ſuch as the Doctor has related, it may indeed be an objection to keeping flowers in our apartments, but none

to

to the night air in large cities, where no vegetation goes on.

It will be expected that, inſtead of arguing from general principles, I ſhould adduce inſtances of the ſafety and utility of this innovation; and the expectation is reaſonable: but it would ſwell this eſſay too much to enter into numerous and minute details; I ſhall however mention a few circumſtances, in addition to my remarks on Dr. HALES's ventilators, which will, I hope, carry conviction along with them.

It is an incontrovertible truth that, in general, ſuch perſons as are precluded, by neceſſity, from the indulgence of warm and cloſe rooms; and are deprived even of the benefit of comfortable firing, are more hardy, and enjoy firmer health, than the opulent; though no habits of living can afford an entire exemption from diſeaſe. Hence it is, that though indigence, and pinching want, in many of the lower rank of every ſociety, is a grievous relative evil; yet affluence and luxurious indulgence expoſe us to diſtreſſes of a different kind, and there is nearly a compenſation throughout; the balance being rather in favour of the middle rank in every ſociety.

Of the ſafety of the practice I recommend, my own family affords a manifeſt proof; nor have I ever heard that any of my friends or patients who have made the experiment, have had any reaſon to repent it, but the reverſe.

About ſixteen years ago I attended the late Sir JOHN ASTLEY, whilſt he reſided on his eſtate at Everley in Wiltſhire. This old gentleman, then above 80, lay, during the ſevereſt part of the winter, in a room without fire, and a bed without curtains, and every morning plunged into the cold bath; and had he not, from a ſpirit of obſtinacy, neglected and miſmanaged himſelf when labouring under a complaint not dangerous in its nature, he might have ſurvived ſeveral years longer.

That the admiſſion of cold air into bed-chambers is of uſe in preſerving health, cannot be doubted by any who have read the preceding part of this chapter; for if foul air weakens and deſtroys the ſprings of life, pure air muſt neceſſarily ſupport and invigorate them.

If at any time I neglect to admit air into my bed-chamber, before I go to bed, my night is ſpent uncomfortably, I am hot and

feveriſh

feverish, and I wake distressed by head-ach, and other disagreeable feelings. This may be partly attributed to habit; but it affords an irrefragable proof, that cool and pure air is more friendly to the human system, than our being immersed for many hours in the hot and putrescent vapours exhaled from our own bodies.

Impure air is peculiarly inimical to the nervous system: it relaxes and enfeebles the general habit, and increases the irritability of the body.

On conversing with a sensible and ingenious *gentleman*[e] on this subject, he informed me that he had for many years laboured under a complication of nervous symptoms, for which he had obtained no relief from medicine. He at length determined to try the effects of ventilating his chamber in the manner I have mentioned; and has been benefited thereby beyond expectation.

[e] Mr. Lucas, of the York Hotel at Bath.——If an University education, very respectable family connections, urbanity of manners, and integrity of heart, constitute a *gentleman*, no man has a higher claim to that character than my old friend Mr. Lucas.—Many years ago I knew the brother of an English Peer in Ireland, in the same rank of life, and with similar qualifications.

On my communicating these remarks to an eminent physician here, he favoured me with the following letter.

"I do not wish to have my name mentioned in the detail of my case; it will be "sufficient to say, that having for many "years been occasionally subject to palpitations of the heart, shortness of breathing, "great anxiety and depression of spirits, universal tremor, and other symptoms of the "kind, usually called nervous; after trial of "many medicines of the antispasmodic kind, "I found nothing so effectual as a strict attention to preserving a due temperature of "body during the night, at which time the "above symptoms were most apt to recur. "In order to preserve this temperature, I "found it necessary to use only a moderately "thin quilt in the summer, with an addition "of a moderately warm blanket in the winter, and no fire in the room; one window "of which was kept open all night in the "summer, and the whole of the day in cold "weather. This regimen produced sound "and refreshing sleep, and almost an entire "exemption from many troublesome symptoms of a similar kind that frequently came "on in the day time."

Other inſtances have occurred to me of a ſimilar kind; but not ſo deciſive of the efficacy of this practice: Theſe caſes, however, will, I flatter myſelf, encourage invalids, thoſe eſpecially who labour under nervous complaints, to give a fair trial to means which are likely to contribute ſo much to their eaſe and comfort.

Many perſons who labour under chronic diſeaſes, are diſtreſſed by an irregular fever, which, from the impure air they breathe for many hours in bed, is moſt troubleſome in the night. I know, from experience, that it is much abated, and ſometimes entirely removed, by the admiſſion of cool air; and the ſlumbers of the invalid become leſs interrupted, and much more refreſhing. To ſuch as labour under catarrhal coughs, which often terminate in conſumption, to ſuch alſo as labour under this diſeaſe in an advanced ſtate, and to the aſthmatic, this mode has been ſingularly beneficial.

To conclude; I can venture to affirm, that, by a cautious uſe of the expedients I have recommended, diſeaſes may often be prevented, and invalids frequently relieved.

ESSAY

ESSAY III.

An ENQUIRY *concerning the propriety, or neceſſity of uſing other* REMEDIES, *during a Courſe of* MINERAL WATERS, *or of* SEA-BATHING.

WATERING places have, for ſome years, been very much reſorted to, not only for the purpoſe of amuſement and diſſipation, but for the benefit of invalids.

Though phyſicians have, in general, approved of ſea-bathing, as a powerful remedy; yet they have not been ſo unanimous with reſpect to the efficacy of other mineral waters.

Some phyſicians have been of opinion, that the proportion of their active principles is ſo ſmall, that they are very little better than common water; whilſt others, acknowledging the efficacy of ſome, have denied the medical virtues of others.

It is probable that, whilſt the phyſicians who reſide at watering places have, from local experience, acquired an *overweening* predilection for particular mineral waters; others, not having been in the habit of conſidering them as a part of medicine, are diſpoſed to undervalue them.

There is a conſiderable diverſity of mineral waters in this kingdom, which, from the nature of their active principles, muſt have different powers, and conſequently muſt be adapted to the relief of different diſeaſes.

Of thoſe invalids who reſort to watering places, ſome conſult the reſident phyſicians, others are furniſhed with preſcriptions and general directions by the phyſicians or apothecaries who ſend them thither; ſome put themſelves under the direction of apothecaries; and not a few, deeming all advice unneceſſary, act according to their own opinions, feelings, and caprices.

Various reaſons may be aſſigned why ſuch perſons are generally diſappointed. Some of them, by drinking the waters without preparation or a correſpondent regimen, or in too large a quantity, are much diſordered by them: Others uſe them too ſparingly; in either caſe they quit the place under an impreſſion that the waters are deſtitute of medical powers; or that they are not adapted to their particular caſes.[f]

Another

[f] I am credibly informed that ſome of the invalids who come hither are ſuch rigid œconomiſts, as to be contented with the medical advice which they procure from the New Bath Guide, price

Another error committed by many, is their allotting themſelves a certain time for the uſe of the waters; beyond which period it is not always in the power even of the phyſician they conſult to perſuade them to give the waters a fair trial. It is nevertheleſs ſufficiently evident that, from the diverſity in the nature of diſeaſes, and the difference in degree, even of the ſame diſeaſe, a cure, which in one caſe may be effected in two months, will in another require five or ſix: This is frequently confirmed by inſtances which occur in our General Hoſpital; where patients, who after ſix months have not been apparently relieved, have nevertheleſs been compleatly cured at the end of more than twelve months.

If we conſider mineral waters (including ſea-water, which is of this claſs) as medicinal;

price one ſhilling; whilſt others have recourſe to the Pumpers and Guides for directions concerning the uſe of the waters. Were ſuch perſons really ſo indigent as to be unable to purchaſe advice, the Hoſpital would receive them; if not, they juſtly merit all the conſequences which generally reſult from their ſordid parſimony.

Some perſons of this deſcription, after having conſulted a phyſician once or twice, think themſelves qualified to proceed on the ſtock of knowledge thus obtained; but, for reaſons to be aſſigned in the following pages, they are often diſappointed.

and

and if we ſuppoſe that ſome previous preparation for, or regulation of, their uſe, may be neceſſary; it is likely that thoſe who enter on a courſe of them without advice, may not merely loſe their time and money, but actually injure, and even deſtroy themſelves.

The late Lord STRANGE (as I am informed by Dr. FALCONER who attended him) died of an apoplexy, in conſequence of the injudicious uſe of the Bath water; and Baron DIMSDALE tells me he recollects a ſimilar inſtance many years before. The inſtances of the alarming and dangerous, though not immediately fatal effects of theſe waters, when uſed improperly, are very numerous:—An incontrovertible proof of their powers.

Were diſtant phyſicians who ſend patients hither with general directions for the uſe of the waters, ſuppoſed to be quite as well acquainted with their qualities and effects as thoſe who reſide here; *a ſuppoſition not to be admitted*; yet no medical man will venture to aſſert, that a variety of circumſtances may not ariſe, which cannot be foreſeen, and conſequently cannot be provided for: and indeed inſtances of that kind occur daily, even under the eye of the reſident phyſicians.

It

It has been ſaid, that the apothecary, to whom the preſcription is ſent, may be a competent judge of the neceſſary regulations. Though it would be invidious to controvert this poſition; yet it may *at leaſt* be aſked, why, if a patient's caſe is ſo urgent as to require the advice of a phyſician in London or elſewhere, it ſhould be leſs neceſſary to conſult a phyſician at Bath alſo; who may juſtly be ſuppoſed to be more converſant with diſeaſes in which the Bath water is beneficial, than thoſe who ſend the patients hither.

It would not, indeed, be matter of ſurpriſe, if one apothecary were diſpoſed to transfer his patients to another; yet this happens very rarely: whilſt, from the conduct of ſome phyſicians, it might reaſonably be ſuppoſed, that they conſidered apothecaries as their only coadjutors. Whether this be the reſult of extreme humility, exceſſive arrogance, or mean jealouſy, they alone muſt determine.

But it has been whiſpered by ſome of their patients that have come hither, that they were diſſuaded from conſulting Bath phyſicians, not only becauſe it was unneceſſary, but from a *tender regard* to the patient's pockets;

pockets; their Doctors inſinuating, that, if they once got into the hands of the reſident phyſicians, it would not be eaſy to ſhake them off. I truſt however, for the credit of the profeſſion, *as gentlemen*, that very few have been ſo uncandid and unjuſt to their brethren of this place; but I know that the imputation is not totally without foundation, and that ſome of their patients have ſuffered thereby, not only in their purſes, but in their healths.

Among many other inſtances which have occurred, I ſhall mention one.

A perſon of fortune on his arrival here, ſent a phyſician's preſcription to a judicious apothecary, who, on calling on him a few days after, found him much heated, and exceedingly diſtreſſed, by an intemperate uſe of the waters; though the mode of uſing them, as directed by his London phyſician, had been ſtrictly complied with, and the other remedies preſcribed were taken very regularly. The apothecary, in vain, perſuaded him to deſiſt from both, and to conſult a reſident phyſician: he replied, that he was ſtrictly enjoined not to do ſo, but to correſpond with his London Doctor only. The Doctor, on being

being applied to, inſiſted on a continuance of the waters, but changed his preſcription; with ſo little ſucceſs however, that he was ſent for by expreſs; and his fee amounted to a much larger ſum than would have procured his patient the attendance of half the phyſicians in Bath during the whole ſeaſon.

As I have almoſt totally declined the practice and emoluments of my profeſſion, I ſhall not be ſuſpected of partiality, when I declare, that, *a few inſtances of dirty intrigue, and ſordid avarice excepted*, no profeſſional men I have ever known diſcharge their duty *in general* with more liberality and diſintereſtedneſs than the phyſicians of this place; or derive more moderate emoluments from it.

It happens, not unfrequently, that the caſes of the patients who come hither to uſe the waters are ſuch as will not admit of their uſe; ſo that when a phyſician has been conſulted, he has been obliged to forbid their being uſed, and either to ſend the patients back to their quondam preſcribers, or undertake their relief by other means.

A gouty patient conſulted me laſt ſummer for ſome complaints which were found to be connected with gravel. As I could not remain

remain at Bath ſo long as was neceſſary, I left him under Dr. FALCONER's care; by whoſe judicious management he was perfectly relieved, without the uſe of the waters.

In my limited practice I have met with ſome other inſtances of invalids, who have been ſent hither for the benefit of the waters, whoſe caſes were totally incompatible with their uſe. On the contrary, it happens, I believe, very frequently, that in diſeaſes in which the Bath waters are eminently uſeful, they are nevertheleſs deemed improper by thoſe who, from inexperience of their powers, are certainly incompetent judges.

The celebrated Dr. MEAD, under the influence of a preconceived hypotheſis, condemned their uſe, as a bath, in paralytick caſes; though the internal and external uſe of the waters has been found to be more beneficial in ſuch caſes, than all other remedies whatſoever. A very late occurrence has convinced me that ſome of the moſt eminent phyſicians in London ſtill adopt Dr. MEAD's opinion; though manifold proofs of the ſafety and efficacy of warm bathing in palſies occur daily in private and hoſpital practice.

A lady

A lady of my acquaintance, being on a tour with her daughter, who was in a bad ſtate of health, ſent for me, as ſhe paſſed through this place in her way to Briſtol. It ſeems her *doctor*, a *preſcribing apothecary*,[ε] had reprobated the uſe of the Bath waters.

On a curſory enquiry into the caſe, I was of a different opinion; but as I was on the point of making a ſummer's excurſion, and the lady declined conſulting another phyſician, I left her, with neceſſary directions, to the care of a judicious apothecary; and by a letter from the lady, I had the pleaſure of knowing that my opinion with reſpect to its being, in every reſpect, a Bath caſe; and my prediction, that much benefit would accrue from the waters, was verified beyond my moſt ſanguine expectations.

ε I did not, till lately, know that ſuch a race of pſeudo-doctors exiſted; they are not however, I believe, very numerous. Whilſt the London college exerciſes a power of examining all phyſicians who practice in the metropolis and its environs; it will be expected that they ſhould take due notice of thoſe apothecaries, who, not content with the emoluments derived from ſelling medicines, have the preſumption to require fees for preſcribing to their own ſhops: Some ſurgeons, it is ſaid, have alſo encroached on the department and emoluments of the phyſician:—A practice equally illiberal and unjuſt.

I know

I know there are ſome medical men who take every opportunity of reprobating the uſe of Bath waters, in caſes where other remedies avail very little without their aſſiſtance: the moſt favourable conſtruction that can be put on ſuch conduct is, to ſuppoſe that they know very little more of the powers of the Bath waters than their coach-horſes; for I am unwilling to ſuppoſe it poſſible that they can be actuated by illiberal motives.

I ſhall conclude this chapter by an enquiry how far medicinal waters may, or may not, require the uſe of other remedies.

The phyſicians of the preſent time are much more ſimple in their modes of preſcription than their predeceſſors; and when patients reſort to watering-places, a prudent phyſician will cautiouſly avoid the imputation of ſelfiſhneſs, and therefore will preſcribe as ſparingly as poſſible, during a courſe of ſea-bathing, or the uſe of other mineral waters.

But it frequently happens, that the occaſional uſe of other remedies may be indiſpenſibly neceſſary.

It is well known to medical men, that, when diſeaſes are inveterate, we are often

obliged either to change one remedy of the ſame quality for another, or increaſe the power of one medicine by the addition of another. This is the caſe alſo with medicinal waters, which, though in ſome caſes they may require very little if any aid from other remedies; yet in many inſtances they are not *alone* ſufficient to effect the purpoſe.

Few patients are in ſuch a ſtate as to be able to enter on a courſe of this kind without ſome preparatory medicines; and with reſpect to the uſe of Bath water, this is peculiarly the caſe. After this neceſſary preparation, the doſe of the water is to be aſcertained, and the medical man (whether phyſician or apothecary) muſt watch the effects of the water, and determine from time to time what increaſe of doſe his patient will bear. Bathing may be, and is often, neceſſary: the times of bathing, the degrees of heat, and other circumſtances, can only be aſcertained by careful obſervation: the regimen of diet, &c. muſt moreover be fixed upon, and the regulation of all thoſe important points muſt depend on the nature of the diſeaſe, and the effects of the water.

Many

Many untoward circumſtances may occur, which may render the interpoſition of the preſcriber neceſſary. Drinking the waters, or bathing, under the moſt guarded uſe of either, may produce diſagreeable ſymptoms, which may require either ſome alteration in the mode of uſing them, a total ſuſpenſion of the uſe of them for a time, or the interpoſition of ſome remedies, which may qualify their effects, increaſe their power, or remove ſuch ſymptoms, which either they, ſome caſual incidents, or a change in the diſeaſe, may have produced.

In the courſe of a former ſummer, I had many opportunities of confirming this opinion. Being on the ſea coaſt, and acting there as a *volunteer* phyſician, I was very generally conſulted by thoſe who reſorted thither for the purpoſe of ſea-bathing. Several were ſent thither whoſe caſes were improper; and others could not bear the cold bath, unleſs accompanied with the uſe of cordial and ſtrengthening medicines: and I am perſuaded that ſimilar difficulties muſt occur under the uſe of all medicinal waters, whether uſed internally, or applied externally.

In the General Hoſpital here, many more patients recover than in private practice: the reaſon is, that the patients are obliged to comply moſt ſtrictly and implicitly with the phyſicians' orders, reſpecting diet, medicine, and the uſe of the waters; whilſt, from inattention, diſſipation, or ſelf-ſufficiency, private patients frequently fail in obtaining relief, and often return much worſe than they came hither. But whether medicine may or may not be required in aid of mineral waters of any kind, it is manifeſt, from the foregoing obſervations, that courſes, whether of drinking or bathing, ought not to be undertaken without medical advice and attendance.

ESSAY

ESSAY IV.

CHAP. I.

On EMPIRICISM, *or* QUACKERY.

HÆ TIBI ERUNT ARTES.
PUDET HÆC OPPROBRIA NOBIS.

THE term *Empiriciſm* is derived from a Greek word which ſignifies *experience*, the foundation of all ſcience, eſpecially of phyſick.

There was an antient ſect of phyſicians who were termed *Empirics*, in contradiſtinction to the *Dogmatiſts*; but there is a moſt eſſential difference between thoſe *antient ſages* and our *modern quacks*; for the former availed themſelves of accurate philoſophical *analogy* founded on experience; whereas the latter are ſo little accuſtomed to any kind of reaſoning, that they are generally deſtitute of common ſenſe.

Few men have taken more pains in attempting to diſcover the origin, trace the progreſs, and detect the ignorance and knavery, of modern quacks, than myſelf; and as

as quackery has arrived to a truly alarming height, especially in the British dominions, I thought I should essentially serve my fellow subjects, by endeavouring to stem the torrent of this dangerous evil.

The earliest source of quackery seems to have been an opinion entertained by the vulgar, and perhaps not very strenuously discouraged by physicians, that there was something mysterious and supernatural in the medical art. Hence the idea that the cure of diseases was often effected by magical powers and astral influences; so that in the ages of barbarism, priests, soothsayers, astrologers, and fortune-tellers, laid their claims to medical knowledge and practice.

When chemistry began to be cultivated in Germany, many chemical remedies were discovered and adopted in regular practice: The empirics however, having pilfered some of the most powerful from the regulars, sold them as nostrums; and *Paracelsus*, *Van Helmont*, and other quacks, by their vain and insolent boastings, contributed very much to the extension of the evil.

For many ages all medical knowledge was conveyed in the dead languages only, a few books

books excepted, written by Arabian phyſicians in their native tongue; and I may venture to aſſert, that the tranſlation of thoſe works into modern languages, eſpecially the diſpenſatories of the different colleges of phyſicians, has contributed exceedingly to the encouragement of quackery; for from that ſource the moſt ignorant and worthleſs members of the community, having acquired a very ſuperficial knowledge of the moſt powerful remedies, found a more ready reſource for ſupplying their neceſſities, and even attaining affluence, by vending them as infallible noſtrums, than by following their proper vocations of aſtrologers, almanack-makers, taylors, coblers, weavers, *carpenters*, *farriers*, porters, and footmen.

Whilſt itinerant mountebanks were in faſhion; though the breed is almoſt extinct in this country; the merry-andrew generally ſucceeded his maſter, and from tumbler and buffoon was exalted to the dignity of doctor; when in the velvet coat and tye-wig he drew teeth, cut hare-lips, and diſpenſed his infallible remedies, *ſolely* for the benefit of his fellow ſubjects.

Several

Several of those *respectable* gentlemen became afterwards resident doctors, especially in London; and to some of them, and their no less respectable successors, the public is at this time indebted for some of our most celebrated nostrums.

It may be alledged, that these animadversions are dictated by envy and jealousy.

Independent in my circumstances, and approaching the verge of life, I do most solemnly aver, that I have not advanced any thing concerning those men or their nostrums that does not admit of proof; and that my *sole* motives for this publication are, a regard for the interests and welfare of the community, and the credit of that profession of which I have the honour of being a member.

When physicians, by laborious study, and at considerable expence, have qualified themselves for the exercise of their profession, it cannot be very agreeable to them to find their art so much degraded, as that the most illiterate of mankind (for such quacks generally are) could be supposed capable of discharging the duties of it: For so far as regards emolument, I verily believe that physicians suffer little by empirical practice.

With respect to the employments of those people before they commenced nostrum-mongers:—The celebrated WARD, whose remedies are now neglected, because they are known, was a *footman*, and during his attendance on his master on the continent, obtained his nostrums from the monks, who are almost all quacks.——ROCK had been a porter; as was WALKER, the vender of the famous Jesuits drops.——The celebrated electrico-magnetical GRAHAM, who lately made such a noise in this credulous nation, exhibited on a mountebank stage in *America*; and, it is probable, served previously in the office of zany.—MEYERSBACH,[h] who, availing himself of the credulity and cullibility of the good people of this kingdom, has acquired a fortune equal to that of a *German* prince, offered himself as a *rough-rider* to a riding-house in London, but being rejected, commenced doctor.——TURLINGTON was a broken master of a ship.——One FREEMAN, who annexes M. D. to his name, was a journeyman blacksmith, and is lately returned from one of our colonies, where, as an

[h] The ignorance and effrontery of this fellow has been properly exposed by Dr. LETTSOM.

indented

indented servant, he was employed to shoe and bleed horses.[i]—And I remember two fellows in Hampshire, who gathered and dispensed their drugs under astral influences, one of them a *weaver*, the other a *cobler*, who being too idle to follow their employments, found their account in becoming doctors.

Some of these nostrum-mongers have been appendages to the profession; and broken apothecaries and chemists have quitted their proper callings for this idle trade.

Dr. JAMES, finding that book-making was a losing business, derived more advantage in vending his celebrated powder, and analeptic pills.—Sir JOHN HILL, also a voluminous author, dispensed his tinctures and essences:

[i] This self-created M. D. has accused me of misrepresentation; but the gentleman who gave me the information, and several others of most respectable characters, have confirmed the allegation, with some other circumstances of his character which it does not concern the public to know; as being unconnected with his medical pretensions.

A friend of mine, who read the manuscript of the first edition, told me I certainly should be *stung* by some of these empirical *wasps*; but the anonymous and illiterate epistles of these *dull* rogues have evinced them to be merely *drones*.

The brutal and *sordid* artifice of one of those vermin, a *hoary* assassin, though he evaded legal punishment, richly merited the discipline of a horse-pond, or a niche in the pillory.

—and

—and NORTON acquired a considerable fortune by his Maredant's drops.[k]

The newspapers some months ago, announced the death of one of these doctors, who has of late been much celebrated. This man, who could not procure bread as an apothecary, would soon have realized a large fortune as a quack. Availing himself very artfully, of *fashionable* prejudices, and in order that his pills might be adapted to all the fashionable diseases, he wrote a pamphlet to prove that nervous and bilious diseases were intimately connected with gout and with each other. As some sort of reasoning and argument is generally expected in medical dissertations, he pilfered, without acknowledgement, an idea started thirty years ago by Dr. SHEBBEARE, viz. that the primary cause of all diseases proceeds from excess or defect of the electric fire, the novelty and *verity* of which could not fail to recommend it to his fashionable readers. Successors, however, to this celebrated gout doctor, have

[k] The active and enterprising spirit of the other sex has produced several female adventurers in this line, who are, *at least*, as great proficients as their brethren, in the art of puffing off their nostrums.

started

ſtarted up like muſhrooms; and, like them, will probably ſoon *rot* into oblivion.

That theſe men, at leaſt moſt of them, have pilfered their noſtrums from regular practice, admits of the cleareſt proof. The ſpecifications of ſome of the moſt powerful of thoſe noſtrums, given upon oath, are to be found in the patent office; to which any perſon may have recourſe on paying the fees; and moſt of the others have been analyſed, and their compoſition diſcovered.

Another artifice employed by thoſe peſts of ſociety, is to attribute their noſtrums to ſome celebrated phyſician after his deceaſe; and the names of FOTHERGILL, HUNTER, and SOLANDER, have been proſtituted to thoſe knaviſh purpoſes.

It is now well known, that WARD's medicines, except his paſte, which is a moſt abſurd compoſition, had long been in regular practice before he adopted them.

TURLINGTON's *balſam* is the Traumatic balſam of the ſhops. NORTON's *drops* are a diſguiſed ſolution of the ſublimate mercury, which was recommended by Baron VAN SWIETEN, phyſician to the late *Empreſs* of *Germany*. DAFFY's *Elixir* is the tincture of

ſena

ſena of the ſhops. ANDERSON'S *Pills* are aloes with oil of anniſeed. SPEEDIMAN'S *Pills*, extract of chamomile, aloes, and one or two other trifling ingredients. STOUGHTON'S *Drops*, the ſtomachic tincture of the ſhops. GODFREY'S *Cordial*, an infuſion of ſaſſafras, ſyrup, and opium. *Beaume de Vie* conſiſts of aloes, rhubarb, and ſalt of tartar, with a large proportion of liquorice juice to diſguiſe the other ingredients. CHITTICK'S noſtrum is nothing more than ſoap lees: and *Poudre Unique*, is a combination of mercury and antimony. In ſhort, there are none of theſe noſtrums that have not been analyſed by ſkilful chemiſts; and, independent of ſome trivial additions, all of thoſe of any power (a few trifling tinctures of vegetables; thoſe of HILL particularly, excepted) are compoſitions of mercury, antimony, or opium.

JAMES'S celebrated *Powder*, it is aſſerted, was known and adminiſtered in this country above one hundred and twenty years ago; but fell into diſuſe, and was again revived as CORNACHINE'S *Powder*. About the year 1746, Baron SCHWANBERG, a needy adventurer, communicated the preſcription to Dr. JAMES, on certain conditions of co-partnerſhip,

ſhip, which not being fulfilled on the part of JAMES, a law-ſuit was inſtituted againſt him in Weſtminſter-hall; and JAMES attempted to evade the penalty, by alledging that he employed a different kind of antimony in the preparation: a plea which would not have been admitted by a jury of chemiſts.

It would however be illiberal and unjuſt to alledge, that, abſurd and unchemical as the preparation certainly is, it is not a remedy of power and efficacy; for from my own extenſive experience, I know it to be ſo; but the ſame experience enables me to aſſert, that, from the nature of the compoſition, its operation is very uncertain, and that the other reguline preparations of antimony are more ſafe and certain in their operation, and equally effectual.

The only circumſtance which eſtabliſhed the credit of this powder was the bold, yet judicious, practice of gradually increaſing the doſe according as the ſtomach became more habituated to its ſtimulus, or the urgency of the caſe required: and I cannot help expreſſing my ſurpriſe that this mode of adminiſtering active remedies has been ſo much neglected by regular practitioners; and I am well

well convinced from long experience, that if antimonial wine, emetic tartar, or even ipecacoanha, (a more safe and perhaps equally effectual remedy) had been so administered, we should not at this day have incurred the reproach of being obliged to resign our patients to the operation of a quack remedy. It is however to be observed, that though much benefit will certainly result from increasing the doses of active remedies, if they are given by persons of judgment, much mischief will also be done, if those who administer them are unskilful.

It would be a tedious and unprofitable task to enter into a more explicit detail of nostrum-mongers and their remedies; I have however taken notice of some of the principal; and would add moreover, that as these quack medicines are sold to retail dealers, some of them may remain on their hands for years, until they are totally spoiled, and yet they do not scruple to sell them, ignorant or regardless as they are, whether they are sound or not:—an instance of which occurred lately to a gentleman who purchased a quack remedy.

There

There was a time when physicians deemed it inconsistent with their dignity to consent to the administration of quack remedies; but if, from a knowledge of their composition, or experience of their effects, we are assured of their safety and power, it would be unpardonable in a physician to reject any means that may be beneficial to his patient; if he or his friends require it.

Nor is the art degraded by such condescension; for we only avail ourselves of those means which have been pilfered from regular practice, (as JAMES's Powder, and almost all other nostrums of efficacy, have been:) but even were it otherwise, life and health ought not to be sacrificed to idle punctilio; but every means used, and every effort made, that may conduce to the relief of the patient.

One great objection to the use of powerful nostrums, in the way they are commonly administered, is, that as neither the venders of them, nor the purchasers, are judges of the cases in which they are recommended, there is more than an equal chance that they may be injurious: I will explain this matter.

When a physician is consulted on a case, he generally visits the patient from time to time;

time; or the case, if the patient be distant, is accurately described by a medical man, who, together with the account of symptoms, enumerates the remedies that have been previously used, and their effects. But, notwithstanding all the attention of medical men, diseases, especially those attended with fever, are so changeable in their nature, that the plan of cure is often necessarily changed, and the remedy, which is beneficial at one time, may be improper a few hours after; and this often happens *solely* from the operation of the remedy; which requires to be qualified, altered in its dose, or totally omitted.

On the other hand, the *quack*, totally ignorant of the nature of diseases, or even of the operation of medicines; who never, or rarely, sees the patient, and if he did, would be unqualified to judge of either; vends his medicine, accompanied with general directions, and without due cautions concerning the circumstances under which its operation ought to be regulated, mitigated, or omitted.

If, even under the eye of the physician, remedies often produce unexpected and untoward effects; how much more frequently

must this happen in the unguarded manner in which quack medicines are used!

But if the disease should be mistaken, as it sometimes may be by the most sagacious physician, it is either exasperated by an improper remedy, or that time is lost which might have been more properly employed.

Upon the whole of what has been said, we may define a modern quack to be—*a pretender to knowledge of which he is not possessed; and a vender of nostrums, the powers of which he does not understand—in short, a swindler and a knave*, in the worst sense of the word.[1]

The

[1] When physicians (I do not mean quack *doctors*) adopt extraordinary modes of obtruding themselves and their *wonderful* abilities on the notice of the public, it would be no breach of charity to place them on the same form with nostrum-mongers; and the similarity is more obvious, as, in both instances, the merits of the regular doctor and his brother quack are always much exaggerated; whilst that public, to which the appeal is made, is equally unqualified to judge of either. It is with regret, mingled with indignation, that I thus animadvert on the conduct of such of my brethren as have justly incurred this censure. In the preceding essay I took notice of their illiberal treatment of the Bath physicians; and it may fairly be presumed, that they are of the r of those, who, conscious of deficiency in personal merit, endeavour to compensate for that deficiency, by cultivating most assiduously, the good graces of apothecaries, midwives, nurses, abigails, toad-eaters, and puffing gossips. But not contented with this *indirect* attack on their brethren, they generally proceed to *direct* hostilities, and, by the dark and malignant insinuations

The legislators in almost every civilized society have considered them as pests; and have therefore enacted penal laws for the suppression of quackery.

The colleges of physicians were instituted in different kingdoms of Europe, to examine all persons who undertook the practice of the art, inspect all drugs in the apothecaries shops, and destroy such as were unfit; and there can be no doubt but their power extended to the examination of nostrums; and on their report, the venders were subject to severe penalties.

In the reign of James I. an order of council, grounded on a former law, was issued for the apprehension of all quacks, in order

insinuations of themselves or their emissaries, endeavour to blast the reputations of all their competitors. This serious charge may, by some of my readers, be deemed incredible; but it is not less true. Such ungentlemanly arts may reasonably be considered as truly *empirical*, and those who practise them as *swindlers of reputation*, and therefore greater pests of society than *swindlers of property*; insomuch as they, in a great degree, deprive the public of the services and talents of *modest men*, who are generally as much their superiors in ability as in urbanity. That I may, in some degree, qualify the severity of this stricture, I take, with pleasure, this opportunity of declaring, that as I consider my profession as a most useful and respectable science, so I have a most sincere and affectionate attachment to all such of my brethren as discharge their duty with honour and integrity.

to their being examined by the cenſors of the college of phyſicians. On that occaſion, ſeveral mountebanks, water-caſters, ague charmers, and venders of noſtrums, were fined, impriſoned, and baniſhed.

This wholſome ſeverity, it may be ſuppoſed, checked the evil for a time; but in the reign of William the Third, it became again neceſſary to put the laws in force againſt theſe vermin; in conſequence of which, many of them, when examined, confeſſed their utter ignorance, to ſuch a degree, as to be unable either to read or write: others, it was found had been attempting to procure abortion in unfortunate ſingle women; ſeveral of them were diſcovered to be fortune-tellers, match-makers, panders, and bawds. Some of thoſe miſcreants were ſet in the pillory; ſome put on horſe-back, their faces to the horſe's tail, and their necks decorated with a collar of urinals, and afterwards whipped, branded, and baniſhed.[m]

[m] A late newſpaper informs us, that a perſon who believed his health had been injured by a quack, gave his doctor a ſound drubbing, to the great amuſement of the mob: it is to be hoped, however, that this mode of *feeing* will not become faſhionable; otherwiſe it is probable that ſome, even of the regulars, might not always ſleep in a ſound ſkin.

Having

Having repeatedly smarted for a direct violation of the laws, they have endeavoured of late years to evade it, by availing themselves of a power vested in the crown of granting patents for useful inventions. This has, by the sordid avarice of the officers, been shamefully abused; for it may be clearly proved, that, with respect to nostrum venders, few, if any, of their medicines could be deemed inventions, though they were obliged to annex an oath to their specifications. Of those which have been sold without the sanction of a patent (as well as those which have) it has been found, by chemical analysis, that the most powerful are dispensatory medicines, disguised by some trifling additions, whilst others have been found to consist of the most insignificant ingredients, as pith of bread, brick-dust, sheeps dung, &c. the venders depending for success on the strength of the patients' imagination, and the liveliness of their faith.

The impudent imposture of a *German* quack, who lately pretended to cure diseases by animal magnetism, induced the French king to issue an arret, which, if duly obeyed, as it probably will be in a despotic govern-

ment, must effectually suppress quackery in that kingdom :[n] how far our ministers have

[n] Since the publication of the former edition, some of MESMER's magnetic disciples have appeared in this kingdom. A brazier at Winchester, determined to have several strings to his bow, made a journey to London to purchase the magnetic art. Having concerted measures with his wife, they contrived an expedient to evince the *miraculous* power of his art; and whilst he remained in London, she was, in the presence of several of her companions, affected, in a very extraordinary manner, by his sympathetic influence. This was sufficient to establish his credit; patients crouded to him from every quarter, and wonderful effects were attributed to his art, even by some persons whose education and rank in life ought to have rendered them less susceptible of imposition.

A learned and ingenious clergyman of that city, however, assured me that, upon a very minute enquiry, he could not discover that a single instance of relief or cure could be authenticated; and last summer I attended a patient who had been three weeks under this Brazier's care, and who returned so ill as to be now attended by two physicians.

The report of the Commissioners, of whom Dr. FRANKLIN is one, published by order of the *French* king, proves irrefragably that the whole is a gross imposition; and though a depraved imagination might sometimes be so worked upon by the *German* juggler and his pupils, as to produce *even* convulsions; yet such effects were not the result of any medical power, and might be dangerous and even fatal.

Nothing more will be necessary to destroy the credit of this new species of quackery with the learned and intelligent, than the perusal of the very candid report, which does great honour to the Commissioners; several of whom, not being medical men, could have no motive but the love of truth; and I am convinced that if other species of quackery were dispassionately examined by learned men, not of the faculty, the futility or danger of their pretensions would be as effectually exposed.

acted

acted wisely in imposing a tax on nostrums, instead of punishing the venders, may be doubted. The tax seems to be equally politic as a former gin act, which added to the revenue, whilst it sacrificed the morals and healths of the subject.

Were I to enumerate all the instances, within my own knowledge, of the dangerous and fatal effects of a misapplication of the most powerful of these nostrums, the detail would be almost incredible: a few instances may suffice.

JAMES's *Powder*, though confessedly beneficial in certain stages of inflammatory diseases, has, not unfrequently, vomited, purged, or sweated to death, persons labouring under low, malignant, and putrid fevers, who might have been saved by a liberal use of bark, snake-root, and wine.°

The habit of taking JAMES's *Analeptic Pills*, since *bilious* diseases have become *fashionable*, has irreparably injured many constitutions, by creating a necessity for the frequent use of

° The celebrated Dr. GOLDSMITH was destroyed by an injudicious use of JAMES's *Powder*; and notwithstanding JAMES's assertion, that it had been found beneficial in the malignant yellow fever of hot climates, the reverse is undoubtedly true.

purges,

purges, which, in most of the cases in which they are used, are not much less deleterious than the most virulent poisons.

TURLINGTON'S *Drops*, given imprudently in colics, have brought on fatal inflammation of the bowels and kidnies. CHITTICK'S medicine, in one instance which fell within my cognizance, produced a fatal putrid fever. How many unhappy infants have been lulled into fatal sleep by GODFREY'S *Cordial!* and how many persons have been thrown into dangerous salivations by MAREDANT'S *Drops!* The wife of a respectable magistrate of the city of London, and my particular friend, was destroyed by the consummate ignorance of MEYERSBACH; and there is reason to believe that the valuable life of the husband was shortened by the same means.

With respect to testimonies in favour of nostrums, many are obtained by perjury, and others are exaggerated by ignorance; and whilst the supposed cures are published with much parade, the miscarriages are concealed with industrious care.[p] That they may have been

[p] A notorious instance of this happened in the metropolis of a neighbouring county:——The vender of a celebrated quack remedy

been sometimes beneficial, it would be uncandid to deny; as a powerful remedy, producing, by the violence of its operation, a great and sudden change in the constitution, may either eradicate an inveterate disease, or subvert the powers of life: but I would submit to the serious consideration of my readers, whether, as regular practice is in possession of as powerful means as any nostrum whatever, it would not be more prudent to intrust the administration of them to those, who, by a liberal and regular education, are *alone* qualified to render them equally safe and efficacious; or if they must have quack remedies, let them be taken under the eye and regulation of a person of skill.

It has been alledged, that regular practitioners, by a timid routine, or selfish procrastination, deprive their patients of those most powerful aids of which quacks have

remedy published in his paper the case of a person *supposed to be cured* by it, and annexed the name of a respectable clergyman as a witness and a voucher, without his privity or consent; and, notwithstanding the remonstrance of this gentleman, and the declaration of two medical men of character, that they could indubitably prove that the *identical person*, and several others, were absolutely *killed* by it, he not only refused to insert the cases and vouchers in his paper, but had the audacity to repeat the advertisement.

availed

availed themselves. If this charge be, in any respect, well grounded, it is more applicable to the past than present times; as a more bold and decisive practice is now very generally adopted.

Some of the abettors of these quacks (for very few of them have been able to vindicate themselves) have insinuated, that though deficient in the general principles of physic, they have acquired, by experience, not only a sufficient knowledge of the operation of their nostrums, but of the nature of the diseases to which they are adapted.

I answer, that the medical art resembles a circle, each point of which is so connected with the other, that in order to obtain an accurate knowledge of a part, the whole must be understood: And to shew the nature and extent of medical knowledge, and those branches of learning and science with which it has an intimate affinity, in my treatise on the difficulties of studying medicine, I have enumerated the qualifications necessary to form a skilful physician; and, upon a fair comparison, I may trust to the candour of my readers to determine, what portion of that knowledge can be justly claimed by the herd of nostrum-mongers.

There is so intimate a connection between all the branches of medicine, that none of them can be dispensed with in the education of a physician: as I shall endeavour to shew by the following example, which I shall, I hope, make intelligible to every reader.[p]

A person complains of a *difficulty of breathing*. To form a just judgment of the nature and causes of this symptom, which is a morbid affection of manifold diseases, not only of the organs of respiration, but of others by sympathy, the consulted physician must first avail himself of his *anatomical* knowledge of the structure of the lungs, and of the other organs which contribute to the function of breathing.

From *physiology* he learns the condition of the different organs necessary to a free, equal, and easy breathing, which afford the signs of a healthy state of the organs.

From *natural and experimental philosophy* he knows that certain qualities of the air are necessary for this purpose; and that a perversion of those qualities may be injurious to breathing.

Pathology instructs him that this symptom is connected with some affection of the lungs,

[p] See the philosophical sketch of the natural history of the human body and mind.

or other organs of breathing. But as he proceeds in his enquiries, the investigation becomes more intricate and perplexed, especially when he attempts to determine to which of the many diseases of these organs this symptom belongs: whether, for instance, it is connected with different species of sore throat; whether it proceeds from some fault in the lungs themselves; whether the affection is catarrhal, inflammatory, consumptive, asthmatic, rheumatic, gouty, nervous, &c. or whether, these organs being in a sound state, the evil may not proceed from the air being too hot, cold, moist, or dry; or impregnated with noxious vapours of lead, brimstone, and charcoal, &c.; or whether it may be connected with fever, or produced by various eruptions repelled from the surface, and thrown on those organs; as of miliary rash, itch, small-pox, measles, &c.; or, finally, whether, neither the organs nor the air being faulty, it may not proceed from blood or other humours floating in the cavity of the breast or belly; or from some diseases of the heart, liver, stomach, and other organs, worms, &c.; the lungs being only affected by sympathy or contiguity. If the case be still

ſtill obſcure, he endeavours to elucidate it by enquiring into the former ſtate of the patient's health, his mode of life, the diſeaſes he has been ſubject to, and his temperament or habit of body. From all theſe, compared with each other, he with the utmoſt caution, and by the ſtricteſt *analogical* reaſoning, aſcertains the nature of the diſeaſe, its cauſes, and its degree; he forms his prognoſtic concerning the probable iſſue; and determines what will be the beſt means of averting farther danger, and promoting recovery. If he errs in any eſſential circumſtance of enquiry or judgment, concerning the nature of the diſeaſe, every ſubſequent ſtep muſt participate of the error.

Having formed his plan of cure, he runs over in his mind all the different claſſes of remedies, and from thoſe ſelects ſuch as he deems moſt proper, and aſcertains the doſes of them. He aſſiduouſly watches their effects from day to day, leſſens or increaſes their doſes, or even changes them as circumſtances ſhall ſuggeſt. It often happens that, from their operation, he may acquire a more correct, or even a new idea of the nature of the diſeaſe; or a change of ſymptoms in the progreſs

progress of it, may make a different mode of treatment necessary. Thus he proceeds, with extreme care and circumspection, until the disease terminates in recovery or death.[q]

This, out of a multitude of instances which might be adduced, is the most simple and intelligible I could select; and yet many essential and intricate circumstances are omitted.

Such of my readers as have perused the preceding pages, and shall read my essay on the difficulties attending the study of medicine, with care, will, I flatter myself, anticipate me in the following inferences.

1*st*, That the science of medicine requires extensive knowledge, and much sagacity.

2*dly*, That from the multiplicity of diseases, and the difficulty of investigating their nature, even the most skilful may err; but that they, *and they only*, are qualified to correct their errors by nice observation, and accurate reasoning.

3*dly*, That much danger may arise from unqualified persons undertaking the care of

[q] It will not be necessary to apologize for this explanatory narrative; as the *medical* ladies are in the daily habit of hearing and detailing fictitious cases of *wonderful* maladies and *miraculous* cures.

the ſick; and that quacks in general, *whether male or female*, are totally deficient in medical knowledge.

4*thly*, That how effectual ſoever quack remedies may be; yet their being adminiſtered without a due knowledge of the diſeaſe, or attention to the effects of the remedies, may be attended with fatal conſequences; and that if ever they relieve, it muſt be by chance.

But as it may be deemed an act of injuſtice to any man who claims the merit of an invention, to deprive him of the reward of his ingenuity, I would propoſe, that every perſon who has invented an uſeful remedy ſhould, on oath, deliver the preſcription to three members of the colleges of phyſicians of Britain or Ireland, appointed by their reſpective Legiſlatures, and that, after a fair trial of its efficacy, a reward be voted by parliament.

There is nothing novel in the propoſition; as ſomething ſimilar was done in the caſe of Mrs. STEVENS's medicines.

Or ſhould it be alledged, that phyſicians may not report candidly on the reſult, ſome members of the Royal Society might be joined with the medical men, as has been

very

very judiciously directed by the French king in the case of animal magnetism.

If such a regulation should be adopted, it would be necessary to suppress the nostrum-mongers, by enforcing, with rigour, all the laws enacted for that purpose; and should the other regulations which I shall take notice of in the next chapter be carried into execution, I am firmly persuaded, that many of the most valuable members of the community, now annually lost, would be saved, to the great emolument of the nation.

CHAP. II.

LADY DOCTORS.[1]

Mrs. HARDCASTLE.

Did I not prescribe for you every day, and weep while the receipt was operating?

TONY LUMPKIN.

Ecod! you had reason to weep, for you have been dosing me ever since I was born. I have gone through every receipt in the *Family Physician* ten times over; and you have thoughts of coursing me through *Quincy* next spring.

She Stoops to Conquer, Act 2d.

I HAVE allotted a separate chapter to my very respectable sisters and coadjutors; as it would have been an unpardonable insult to have put them on a level with the sordid and selfish race of nostrum-mongers; to whom, I am persuaded, they are very much superior in every liberal and *medical* accomplishment: though I am apprehensive, they may be *somewhat deficient* in those qua-

[1] This term does not quite please me, because some of the other sex have also a strong propensity to quackery; however, the proportion of female doctors being at least ten to one of the male, their claim to pre-eminence is indisputable.

lifications which would be neceſſary to their commencing phyſicians, if the branches of knowledge enumerated in the eſſay on the difficulties of ſtudying medicine, are indiſpenſible, as they undoubtedly are.

Ladies (or gentlemen) doctors may be defined *ſage* perſonages, who not only phyſick themſelves; but, *without fee or reward*, preſcribe, and often adminiſter their remedies to their friends, dependants, and poor neighbours.[s]

I proceed to enquire how it has happened that the fair ſex has arrogated to itſelf the privilege of diſcharging the duties of the phyſician and ſurgeon.

As, by their domeſtic avocations, and the neatneſs, delicacy, and tenderneſs, peculiar to the ſex, they have ever been deemed well

[s] I have however known ſeveral *doctors* of this deſcription, who were much more alert in preſcribing, than in taking, *even* their own preſcriptions: and I have generally concluded, that their confidence in their own ſkill ſuffered *ſome* abatement when their perſonal ſafety was concerned. Human vanity is much gratified on every occaſion wherein we can evince our ſuperiority, with reſpect either to rank, opulence, or knowledge; and it muſt certainly be a very flattering circumſtance for a *lady doctor* to poſſeſs, or ſeem to poſſeſs, a degree of ſcientific knowledge by *ſix hours* hard medical ſtudy, the attainment of which coſts a *male dunce* the labour of as many years.

qualified

qualified to diſcharge the duty of nurſes; ſo, from the habit of adminiſtering remedies, they at length aſſumed a right of preſcribing them: The tranſition was eaſy and natural.

This laudable ambition of filling the firſt department of the medical art is of conſiderable antiquity: for we know that, among our Gothick anceſtors, women were the chief phyſicians; and as female emulation is unbounded, they alſo claimed a place at the national councils; and even diſcharged the duties of the *corps diplomatique* with ſingular addreſs and ſucceſs.[t]

[t] Beſides the *queen of Sheba,* who was her own plenipotentiary to the *wiſeſt* of kings; the reſult of whoſe royal *tête à tête* has been amply detailed; we have two other inſtances of female plenipo's; one to Charles the XIIth of Sweden, whoſe embaſſy failed, merely from want of gallantry and *politeſſe* in the iron-headed Monarch: But the lady, afterwards Ducheſs of Portſmouth, ſucceeded better with *our* Charles, and, by her *very honourable* connection with that prince, had the pleaſure of contributing greatly to the glory of the *Grand Monarque.* Of the ſuperiority of female talents in the arts of government, our *Elizabeth* and the *Thaleſtris* of the North, afford ſhining examples, and though it has been invidiouſly ſuppoſed that a late race of our kings chiefly derived their embarraſſments and misfortunes from *petticoat* influence; I cannot, for the honour of the ſex, aſſent to the allegation; as we know that female influence has long predominated in the councils of a neighbouring kingdom, remarkable for the ſubtilty, *rectitude,* and ſucceſs of its political evolutions.

The

Though the female hereditary claim to the medical department has been diſputed, and occaſionally uſurped, by their male rivals, they have never been able totally to ſuperſede them; and it is certain that they have, to this day, retained a conſiderable ſhare of their former medical conſequence.[u]

In thoſe halcyon days, when men of rank and fortune ſpent the greateſt part of their time at their country manſions, the miſtreſs of the family neceſſarily commenced a *Lady Bountiful*; and, not contented with the exerciſe of the chemical art in preparing her preſerves and pickles, had recourſe to her family receipts, *all of them infallible*; and

The fair ſex has been no leſs eminent in every other department of erudition and ſcience; ſome have excelled in claſſical learning, criticiſm, hiſtory, and philoſophy; others have evinced ſuperior talents in the fine arts; a few have even entered deeply into the abſtruſe ſpeculations of geometry and metaphyſics; and it is evident that they have a preſcriptive claim to the province of phyſick: The period therefore, is not, perhaps, very remote, when our academical chairs, *that of rhetoric eſpecially*, may be very ably filled by female profeſſors—when ladies ſhall become fellows and even *preſidents* of our colleges of phyſicians—and lady doctors ſuperintend the healths of crowned heads. In the *Aſiatic* and *African* courts, there would be *peculiar* propriety in ſuch appointments, as they might miniſter in more than one capacity.

[u] In ſo much that few of our profeſſion have attained any degree of *eminence* and *celebrity* without the aid of female patronage.

from

from this invaluable ſtore of knowledge, acquired the art of preparing plaiſters, ſalves, and ſurfeit waters. Theſe ſhe diſpenſed with a liberal hand; and, with much condeſcenſion and humanity, viſited the ſick and lame; and not only diſtributed her remedies, but moſt charitably ſupplied all their wants.

About the middle of the laſt century, indigent men of ſome learning publiſhed medical treatiſes for the uſe of the *Lady Bountifuls* of that day; who, from *Ariſtotle's Maſter-piece*, *Culpepper's Midwifery*, *Salmon's Practice of Phyſick*, and *Every Man his own Phyſician*, made a very *reſpectable* addition to their ſtock of medical knowledge; and it is from the ſame inexhauſtible funds, all our noſtrum venders have borrowed their *infallible* remedies.

A revolution in the habits of life has now almoſt extinguiſhed the race of the *Lady Bountifuls*; and the poor are now generally reſigned to the care of thoſe humane and *tender-hearted* gentlemen, the pariſh officers.

It would, however, be extremely unjuſt to inſinuate, that the preſent age is deficient in charity; for the very reverſe is the caſe; as is evident from the liberal ſubſcriptions to

hoſpitals and pauper diſpenſaries, and the readineſs with which diſtreſſed individuals are relieved. The ladies alſo ſtill retain their natural diſpoſition to do good; and, when they retire to their country ſeats, carry with them a medicine cheſt, generally the *refuſe* of a druggiſt's ſhop; and from that magazine, not only phyſick the whole family, but diſpenſe their remedies to all the indigent neighbourhood.

Without preſuming to arraign the motives for this act of charity, I would only obſerve, that in their mode of diſpenſing it, they fall ſhort of their predeceſſors: for, inſtead of following the example of the quondam *Lady Bountifuls*, they commonly take their report of the patient's caſe from an upper ſervant, to whom the adminiſtration of the remedy is intruſted; whilſt the ſupply of nouriſhment ordered for the ſick is generally intercepted by the poſtillion or ſtable-boy, who is employed to deliver it.

As the *doctors*, of this deſcription, are ready to aſſign various reaſons for the exerciſe of their art, I ſhall conſider and reply to them ſeparately.

1*ſt*. They

1*ſt.* They alledge, that, as they underſtand their own conſtitutions, they are beſt qualified to determine what is fit for them.

If, by a knowledge of conſtitution, the ladies mean that they have learned, from experience, what foods and drinks, and what modes of living, are moſt agreeable to their conſtitutions, I concur with them in ſome meaſure; though, as our conſtitutions change at different periods of life, and often in conſequence of diſeaſe, it may happen, that what is ſuitable at one time may be very improper at another; eſpecially if the maxim be extended to the uſe of medicine.

2*dly.* They aſſert that, whether they preſcribe for themſelves, or for others, they deal in nothing but *ſimple* things; which, if they do no good, cannot do any harm.

I anſwer, that if the diſeaſes for which they preſcribe have a dangerous tendency, and there are few diſeaſes which have not in ſome degree, delay creates danger; and it often happens, that when means, equal to the urgency of the caſe, are omitted, the ſeaſon for relief is irretrievably loſt; and a ſlight diſeaſe frequently degenerates into a mortal malady.

In

In this way, I am convinced, thouſands of moſt valuable ſubjects are annually loſt to the community; of which a great proportion die of that fatal Engliſh malady *conſumption*. Inſtances of this kind occur daily to phyſicians, who have reaſon to lament that their efforts are unavailing, and their art diſcredited, in conſequence of neglect or miſmanagement in the earlier ſtages of diſeaſe; when there was a moral certainty of danger being prevented by proper management.

There is a conſiderable degree of inconvenience, often of danger, in perſons being in the habit of taking even trivial remedies, for the removal of ſuppoſed complaints; I ſay *ſuppoſed*, becauſe they often are ſo; and the very operation of thoſe drugs may create ſo much diſturbance in the conſtitution, as really to produce diſeaſe, inſtead of preventing or removing it. This is peculiarly the caſe with rhubarb, magneſia, *Anderſon's*, and *James's* analeptick pills, &c. the firſt doſe creating a neceſſity for a ſecond; and ſo on, until they become indiſpenſibly neceſſary:[x]

Of

[x] In this inſtance I muſt diſſent from Dr. CADOGAN, who, in the few hints he gives concerning the medical management of gouty patients, (and he conſiders gout as a repreſentative of all other

Of the dangerous effects of this practice, I have given two instances in the Essay on *Fashionable Diseases*, to which I refer the reader; and two more have occurred to me since the publication of the former edition.

A celebrated ancient physician[y] has cautioned us against the destructive practice of using preventive remedies; and I believe that our failure in the cure of diseases often proceeds from this practice; the constitution being, by habitual use, rendered insensible to the impression of remedies, when they are really necessary.

In my Essay on *Regimen*, I have made a remark, which for its importance ought to be repeated here. In establishing an essential distinction between diet and medicine, I observed, that the difference between them was, that wholesome diet was that which was easily

other chronic diseases) seems to approve of the daily use of laxatives: indeed the whole of what he says on that head (so far as it is intelligible) is, I am persuaded, in the opinion of most of his brethren, peculiarly objectionable. The Doctor ought either to have been more explicit, or totally silent; as the practice he hints at is novel and hazardous; and, in improper hands, must necessarily be very injurious.

[y] *Celsus*:—Cavendum ne præsidia adversæ valetudinis in secunda consumantur.

changed

changed by the conſtitution into its own nature, without producing any change by which the organs might be weakened or oppreſſed: on the other hand, there are very few medicines of any conſiderable power, thoſe eſpecially which promote the evacuations of vomiting, purging, or ſweating, which do not change the body more than they are changed by it; and many of them are totally unconquerable by the powers of the conſtitution; and thereby correſpond in their nature to one definition of poiſons: and indeed as medicines and food may be converted into poiſons, ſo poiſons are, when ſkilfully adminiſtered, very ſafe remedies; for mercury, antimony, and opium, are really poiſons in their nature.

If we are ſlightly indiſpoſed, which is often the effect of luxurious indulgence, irregular hours, or both; the ſafeſt means of relief is quiet and abſtinence, which enable the conſtitution, by its innate powers, to obviate or remove the ſeeds of diſeaſe.

But in no inſtance is this preventive plan ſo abſurdly and injurioufly employed as with reſpect to infants, children, and young people; and by this means many a tolerable conſtitution

conſtitution has been phyſicked into a ſtate of irremediable weakneſs, infinitely worſe than premature death.

3*dly*. As an apology for the modern practice of keeping cloſet medicines, and amongſt theſe an aſſortment of quack noſtrums; it is alledged, that, beſide their not being able to truſt to apothecaries remedies, which are often bad in their kind, the apothecaries' bills are exorbitant, and much enhanced by their ſelfiſh procraſtination.

To theſe complicated charges, I reply; that the moſt creditable and conſcientious apothecaries generally ſupply themſelves with compound chemical medicines from Apothecaries-hall, and that it is likely they would, for their own credit, procure better drugs than thoſe uſually ſold as *cloſet* medicines; as they are certainly better judges of their qualities than any perſon not of the profeſſion.[z]

With

[z] I have however had many opportunities of being convinced that ſome apothecaries and druggiſts are either ſo unſkilful or ſo ſelfiſh, as to purchaſe bad medicines, or continue to vend them after they become unſound.

To remedy this great evil, it is ſubmitted to the wiſdom of the legiſlature, whether ſome expedient may not be fallen upon to oblige all apothecaries in the Britiſh dominions to ſupply themſelves ſolely from Apothecaries-hall with every ſpecies of medicine.

With reſpect to the exorbitance of charges; as an apothecary is obliged to have a large aſſortment of medicines, many of which may never be uſed before they ſpoil; I am perſuaded, that, though the charges are apparently high, their advantages are not, on the whole, greater, or ſo great, as thoſe of retailing tradeſmen. Reſpecting the laſt charge; I believe that, with regard to men of any credit or character, the inſinuation is cruel and without foundation.

4thly. A reaſon aſſigned for perſons of ſlender means having recourſe to the uſe of quack remedies, is the high fees of phyſicians, and the inſufficiency of apothecaries.

It is a delicate taſk for a phyſician to diſcuſs the point with regard to the qualification of apothecaries.[a] If their education be ſufficient,

cine. That great and wiſe Princeſs, the *Empreſs of Ruſſia*, has directed that no remedies ſhall be diſpenſed in her extenſive dominions, except ſuch as are vended under her authority.

[a] There is an old Latin proverb, which implies "that the cowl "does not make the monk;" and I am ſorry truth obliges me to declare, that it is ſo far applicable to our profeſſion, that every man who aſſumes the title of M. D. has not, either by his education, ſkill, or conduct, any juſt claim to the diſtinction; whilſt men under the denomination of ſurgeons and apothecaries may, by genius and education, be poſſeſſed of the abilities, without the credentials of a phyſician. Unhappily, however, for the community,

ſufficient, phyſicians are *unneceſſary*; but as the publick does not yet entertain that opinion, any more than the apothecaries themſelves,

nity, the inſtances are rare, and it is ſtill more unfortunate, that the public at large are not qualified to diſtinguiſh them from their ignorant and preſuming brethren. I believe many of my brethren, as well as myſelf, are much gratified when they meet with men of this character; and are diſpoſed to conſider them rather as reſpectable coadjutors, than as holding an inferior rank in the profeſſion.

Whilſt I am upon this ſubject, I would juſt obſerve, that the extra-licences granted by the London college, to country ſurgeons and apothecaries; and the honorary diplomas granted by the Engliſh and *ſome* Scotch Univerſities, to men who had not only *not ſtudied* at them, but had not even ſeen them, are extremely derogatory to the credit of the profeſſion; and very injurious, not only to thoſe phyſicians who have obtained their degrees by reſidence and examination, but to the public at large: For though I am firmly perſuaded, and even know, that ſome of thoſe gentlemen, who come under the former deſcription, are men of real merit, yet the mode in which they have obtained their degrees is certainly very irregular and improper.

I have been led to add to this long note, by a letter I received from an advertiſing quack ſince the 2d edition of this work went to preſs, and who boaſts of his being a graduate of a college of Aberdeen. I know that *ſome* of the northern univerſities of this kingdom have, *to the diſgrace of literature and ſcience*, granted diplomas to illiterate men, who, ſo far from having ever ſtudied at, or been examined by, theſe univerſities, never ſtudied at any.

From inſtances probably ſimilar to this, ſome gentlemen bred at Oxford and Cambridge have ſometimes inſinuated, that all *Scotch* degrees in medicine are equally queſtionable: but I cannot allow this opportunity to eſcape me, of vindicating the northern part of this kingdom from the *indiſcriminate* and *invidious* imputation.

1*ſt*. The

ſelves, *a few ſelf-ſufficient men excepted*; it is much to be regretted that the fees of phyſicians are ſo high, that few, excepting people of

1*ſt*. The Univerſity of Edinburgh is the *only* one in the Britiſh dominions, from whence phyſicians are not warranted to enter on the practice of their profeſſion, without a certain term of reſidence, *medical* ſtudy, and *profeſſional* examination.

Should it be alledged that the gentlemen in the medical line at Oxford and Cambridge take the degrees of Bachelor and Doctor at their reſpective Univerſities; I anſwer, that, from the obſolete inſtitutions of thoſe Univerſities, the *Elèves* of both, who chuſe to enter on the *medical* practice, are preſcriptively warranted to do ſo, without taking either; and many of them paſs '*that Bourne from whence no traveller returns*' without being Doctors or even Bachelors of Phyſick; and conſequently without having undergone a ſingle *medical* examination.

2*dly*. That the Engliſh Univerſities, and that of Dublin, have *hitherto* been ſo little deemed *medical* ſchools, how reſpectable ſoever in every other branch of literature and ſcience, that moſt of the ſenior phyſicians were obliged to ſtudy at Leyden, under the celebrated *Boerhaave*; and almoſt all the juniors have acquired their education at Edinburgh; ſo that none *but a few weak men* continue to claim any ſuperiority from their alliance with Univerſities, from which they could not acquire any *medical* knowledge,

3*dly*. That medical degrees by Commendam, or by Biſhop's licence, ought, in this enlightened age, to be totally aboliſhed; the firſt, as a very improper and *injurious* exertion of Royal prerogative; the ſecond, as a groſs abuſe of epiſcopal privilege, unleſs we ſuppoſe, what cannot be admitted, that the Metropolitan is as *ſkilful* a phyſician, as he is an *able* divine.

4*thly*. That, to check the impoſture of Pſeudo-doctors, it were to be wiſhed that the Legiſlature would authoriſe all Magiſtrates of Corporations to call upon every perſon who aſſumes the character of a phyſician, to produce credentials of his having *ſtudied* and

of opulence, can conveniently have *early* recourſe to their aſſiſtance. The only expedient by which this evil can be remedied, would be to adopt the regulations eſtabliſhed in moſt other parts of Europe, viz. to permit none but phyſicians to preſcribe in medical caſes, and ſurgeons in their department; that apothecaries be confined to their original employment of making up preſcriptions;[b] and druggiſts and chemiſts be, under a ſevere penalty, prevented from vending drugs by retail; whilſt the regulation of quackery on the plan laid down in the former chapter, would tend very much to place the practice of phyſick on a reſpectable and beneficial footing.

and been *examined* for his Bachelor's or Doctor's degree, at the Univerſity from whence he has obtained his diploma.

The reader will, I flatter myſelf, believe, that I can have no other motive for theſe remarks, than a filial zeal for the honour of *Alma Mater*, a proper ſenſe of the dignity of my profeſſion; and a due regard for the welfare of my fellow-ſubjects.

[b] The term *apothecary* is derived from a compound Greek verb which ſignifies to depoſite; and the ſubſtantive implies a repoſitory of drugs; ſo that apothecaries evidently deviate from their original deſtination, when they become *preſcribers* inſtead of *diſpenſers* of drugs: However, according to the preſent conſtitution of phyſick, which ſtands in needof much reform, it would be impoſſible to limit them to their proper occupation, unleſs the fees of phyſicians were reduced.

There

There are ſeveral reaſons to be aſſigned for the fees of phyſicians being ſo high. Excepting a few, who have really too much employment to do proper juſtice to their patients, the major part are rarely called in until it is too late; and this rather to *ſave* appearances, than with any great hope of *ſaving* the patient. Thus many years elapſe, before the emoluments of his profeſſion are more than ſufficient to ſupport a phyſician in the rank of a gentleman. If, in proceſs of time, his employment becomes extenſive and profitable, he is willing to compenſate for his former loſs of time; and to endeavour to ſecure for himſelf a decent independency, and a proviſion for his family. But that the profeſſion is *not* lucrative, is evident from the ſmall number of phyſicians who acquire large fortunes.

A phyſician of London, now deſervedly in great practice, aſſured me ſeveral years ago, that, with conſiderable buſineſs, many years had elapſed, before his annual income was equal to 800l.

This was, in ſome meaſure, to be attributed to a liberal plan he adopted of accommodating his fees to the abilities of his patients;

patients; inſomuch that, on a fair calculation, partly from the ſmallneſs of the fee, never or rarely exceeding half-a-guinea, and his gratis viſits, he did not receive more than half that ſum on an average; and that, taking one patient with another, he did not receive more than one guinea for the whole of his attendance during a fit of illneſs. This gentleman has ſince been amply rewarded for his humanity, and indeed, if we conſider the time and labour many phyſicians beſtow in attending hoſpitals, diſpenſaries, and other charitable inſtitutions, and the many viſits they make gratis, the profeſſion will be found not to merit the imputation of avarice and rapacity: though, as among all other orders of men, there may be, and are, exceptions.

Fees ought certainly to be adapted to the abilities of the patients, and other circumſtances; and a man of honour and probity will diſtinguiſh thoſe circumſtances wherein he ought to relax in the article of fees.

Men of fortune, high ſpirit, and great generoſity, are very much diſpoſed to gratify the phyſician in a manner which, if his diſpoſition be not ſordid, he will not accept of; and yet it is a very delicate taſk to refuſe on

ſuch an occaſion without giving offence: on the other hand, as there are many, whoſe circumſtances, when compared with their ſtation in life, enable them to do that juſtice to the phyſician, which their narrow ſpirits incline them to deny him; ſuch ought not to be ſpared; nor do perſons of this turn deſerve to be treated with any degree of delicacy.—Many perſons of a valetudinary habit have acquired ſuch an unlucky bias of mind, as never to be ſatisfied without the attendance of the doctor, and a conſtant courſe of medicine; an honeſt man will diſcourage ſuch a diſpoſition, and avoid availing himſelf of this unhappy propenſity.

Tender huſbands, parents, or relations, to ſatisfy themſelves that they have done their utmoſt, ſhall often ſolicit the attendance of the phyſician, though they know that all remedies muſt be ineffectual; here it would be as cruel to decline an attendance, which might give ſatisfaction to the miſerable patient, or conſolation to the afflicted relations, as it would be ſordid to inſiſt rigidly on the article of fees.

Perſons who, with very limited incomes, are obliged to ſupport a genteel appearance,

(among

(among whom, I heartily wiſh I were not obliged to rank a ſet of men truly reſpectable by their learning and function) may often want the aſſiſtance of a phyſician; though by no means able to gratify him in a manner correſponding to their inclination, or to eſtabliſhed cuſtom. Under ſuch circumſtances, a phyſician of a liberal turn of mind will fall upon ſuch methods of accommodating his demands to the ſituation of his patients, as ſhall not hurt the delicacy of perſons, whoſe feelings, and ſenſe of propriety, are generally in proportion to their education.

I take this opportunity of introducing an obſervation not inapplicable to the preſent ſubject:—

As the powers of the mind are generally weakened by diſeaſe, perſons naturally of firm and ſteady diſpoſitions often become, under the influence of bad health, timid, irreſolute, and peeviſh. Hence it is, that, if not ſpeedily relieved, they change their phyſicians, and, diſguſted at length with the regulars, generally become a prey to ignorant and knaviſh quacks.

Thus it is that thouſands, whoſe maladies would certainly have yielded to judicious and ſteady management, have fallen a ſacrifice to caprice and credulity.

I think it my duty, therefore, moſt earneſtly to recommend to my readers, never to employ a medical man in whoſe ſkill and integrity they have not entire confidence; and that having made their choice, they do adhere ſteadily and implicitly to the uſe of the means he preſcribes; and though their too ſanguine expectations of relief are not gratified, they ought not therefore to arraign either the ſkill of the phyſician or the power of medicine.

A change of phyſicians ſeldom anſwers any good purpoſe; and I may venture to aver, that even conſultations rarely contribute to the benefit of the patient: with reſpect to the employment of quacks, or the uſe of quack medicines, I refer the reader to what I have ſaid on this ſubject in another eſſay.

As for thoſe who labour under imaginary diſeaſes, "*who are ſick by way of amuſement, and melancholy to keep up their ſpirits,*" I recommend to them the peruſal of the very ingenious

ingenious Mr. COLMAN's farce of the Spleen; where this dangerous propenſity to quackery is ridiculed with infinite wit and humour.

It may and does happen, however, that diſeaſes at firſt imaginary become at length real; the functions of the body being gradually depraved and impaired by anxiety and deſpondency.

This, among many other inſtances, ſeems to have been the caſe of the wife of a London tradeſman, who, after having undergone a long courſe of regular and irregular practice, came very lately to Bath, and conſulted me.

The only *benefits* this good woman ſeemed to have derived from her medical diſcipline, were a broken conſtitution, a ruinous expence, and a medical jargon, compoſed of the different opinions of her quondam doctors. I therefore found this poor woman more diſpoſed to explain her ſymptoms, than to deſcribe her feelings. Happily for her, the laſt noſtrum-monger ſhe employed attributed all her ſymptoms to *Bile*; and he having, during twelve months, exhauſted all his ſkill in attempting to tame this monſter, the patient being accidentally informed that Bath waters *were good for the bile*, came hither

ther with the moſt ſanguine expectation that the water would do for her in *three weeks* what her doctors had not been able to effect for her in three years.

Thus it is that wretched hypochondriacs ruin their conſtitutions and embitter their lives, by their perpetual ſolicitude about the preſervation of both; and from their unhappy propenſity to try every new remedy that is recommended to them, have contributed exceedingly to extend and ſupport the preſent deſtructive ſpirit of quackery.

5thly. The Lady Doctors, ſince the publication of ſome *popular* medical books, proceed with more confidence in their private practice than their predeceſſors; as deeming thoſe books ſufficient guides in every caſe that can occur; and when they deign to conſult a phyſician or apothecary, it is rather with an expectation of having their medical ſagacity applauded, than their errors corrected.

When a phyſician hints his diſapprobation of ſuch publications, he is ſuſpected of ſiniſter motives; and as medical men are ſuppoſed to be very averſe from every attempt to remove the veil of myſtery by which

which the art is ſuppoſed to be involved, I ſhall, to avoid the imputation, faithfully detail the ſubſtance of a converſation held ſome years ago, (the quotation excepted) and leave the reader to draw his own concluſions; and for the ſake of brevity, will throw it into the form of dialogue.

About twelve years ago I was deſired to viſit the wife of a gentleman of very reſpectable character, and of profound erudition.

Having examined into the ſtate of my patient's caſe, I was ſhewn into the library, and found on his table *Tiſſot's Avis au Peuple*, and *Buchan's Domeſtic Medicine*.

He joined me in a few minutes, and the following dialogue commenced:—

A. How is your patient, doctor, and what is her diſeaſe?

B. From the general ſymptoms, I am inclined to think there is ſome danger in the caſe; but the diſeaſe ſeems to be ſo complicated and obſcure, that I have not *yet* been able to aſcertain its cauſes, ſeat, or nature.

A. The confeſſion is ingenuous: are you always ſo explicit?

B. Always, when I can rely on the good ſenſe and candour of the perſons concerned.

A. On

A. On perusing the introductory chapter of a book[c] published a few years ago, I was induced to study medicine as a branch of philosophy; and if you cast your eye over my books, you will find a tolerable collection, all of which I have read with care; but the knowledge they afford me has not inspired me with sufficient confidence to attempt the practice of the art, and therefore I requested your attendance.

B. It gives me much pleasure to attend the family of a gentleman who is a judge of medical practice. Physicians, as the Rosecrusians of old, and alchemists of latter days, have been accused of a wish to impress mankind with an opinion, that their art is mysterious and inscrutable to all but the initiated: but from this imputation I claim an exemption; and in that respect, I have the honour of concurring with one of the greatest and best men who ever adorned our profession;[d] and in the publication to which you allude, I have expressed my surprise and

[c] Commentaries on the Principles and Practice of Medicine, by the Author.

[d] The late Dr. *Gregory*, Professor of Medicine at Edinburgh.

concern,

concern, that, intimately connected as medicine is with natural and experimental philoſophy, ſo few men of learning have enquired into its principles as a ſcience, unleſs with a view to practiſe it as an art. Men of general learning might, without much ſtudy or labour, acquire the leading principles of an art, in the improvement and ſupport of which, they are, in every relation of life, ſo deeply intereſted.—" A private " gentleman (ſays Dr. GREGORY) who has a " literary turn, and chuſes to ſtudy medi- " cine as a curious and intereſting branch of " natural hiſtory, will find the hiſtory of his " own ſpecies a more intereſting ſubject, " than the natural hiſtory of ſpiders and " cockle-ſhells. To him ſuch a degree of " knowledge only is neceſſary, as may enable " him to underſtand medical books of merit, " and to judge of the comparative merit of " thoſe men to whom he is to commit the " important charge of his own health, and " the health of thoſe whom he is obliged " by the ties of nature and humanity to take " care of. If ſuch men were to claim their " right of enquiry into a ſubject that ſo " nearly concerns them, the good effects on

" medicine

" medicine would ſoon appear. They would " have no ſeparate intereſt from that of the " art: they would detect and expoſe aſſuming " ignorance, and be the judges and patrons " of modeſt merit.

" Caſes very often occur, where an inge- " nious phyſician ſees his patient haſtening " to certain death. He knows a remedy that " affords a probable proſpect of ſaving his " life; but it is uncommon, not agreeable " to the eſtabliſhed orthodox opinion, and " perhaps dangerous in its operation: Here " is a dreadful dilemma. If he gives the " remedy, and the patient dies, he is utterly " ruined. The *dunces*, who are the moſt " numerous in every profeſſion, are always " at war with genius, and watch its miſcar- " riages with an anxious and malignant eye; " all his preſcriptions muſt remain on the " apothecaries file, and riſe up in judgment " againſt him, and upon any miſcarriage, " the outcry is raiſed and propagated with " the utmoſt malignity.

" The only tame and believing patients " are *the men of ſenſe*, who generally ſubmit " to their phyſician, whoever he is, with " wonderful faith and patience; while all

" the

" the midwives, nurſes, and old women, are " phyſicians; and the dignity of the moſt " ſtately of the profeſſion is often obliged to " ſtoop to the folly and caprices of ſuch " people, who are ſometimes of more conſe- " quence in making a phyſician's fortune " than all the merit he can poſſeſs."

A. I well recollect the ſubſtance of the quotation from Dr. GREGORY's introductory lecture; which I have read with much pleaſure, and a ſincere reſpect for the candour and liberality of that ingenious profeſſor.

I have often been aſtoniſhed to find men of learning and ſcience, from ignorance of the knowledge neceſſary to form a ſkilful phyſician, commend, as miracles of medical ſkill, perſons who in their converſation and manners evinced the ignorance and vulgarity of a groom. How can this be accounted for, but by ſuppoſing that *even* men of erudition deem learning and ſcience to be totally detached from medical ſkiil; and that bald experience is unconnected with medical principle? How therefore can we be ſurpriſed that empiriciſm is countenanced by all ranks, when the moſt diſcerning have formed ſo falſe an eſtimate of the healing art!

B. I have

B. I have had repeated opportunities of making the ſame obſervation.

A moderate knowledge of medical principles would be of great uſe to the *clergy*, eſpecially thoſe who reſide in the country. The middle and lower ranks of people are in general very averſe to medical aſſiſtance; and very unſteady in the uſe of it: but a clergyman, when he knows that he is qualified to give his opinion, will make uſe of his influence to induce his pariſhioners to apply early for relief, and to perſiſt in the uſe of proper means; which medical men, from a ſuſpicion of their being intereſted, can rarely prevail on them to do. Some thouſands of moſt valuable ſubjects are loſt every year in this kingdom, by their avarice, their obſtinacy, or their indigence. A country clergyman, thus qualified, will alſo be able to render very eſſential ſervices to the parochial poor: he will, in ſome degree, be a judge of their diſeaſes, and be able to determine when they want aſſiſtance; and what kind of neceſſaries the pariſh officers ought to ſupply them with, not only to aſſiſt the efficacy of remedies, but to promote recovery, and prevent relapſe.

A. I ſincerely

A. I ſincerely wiſh that my brethren of the clergy would employ part of their leiſure in the enquiries you recommend.

Juſt before you arrived I had been turning over two books now on the table, that I might endeavour to form a tolerable judgment of the nature of your patient's caſe; but have been diſappointed: nor am I ſurpriſed to find I have been ſo, after the frank declaration you have made. What is your opinion of compilations on this plan?

B. You have aſſigned me an invidious taſk, which I wiſh to decline. *Tiſſot*'s work might be of ſome uſe in the mountains of Switzerland, where medical aſſiſtance of any kind is rarely to be met with; but I doubt whether the other was *ſo* neceſſary in a country where medical men abound.

A. As you decline being more explicit, I will venture to give you my opinion.

Theſe compilations either *are* ſufficient guides, with reſpect to the treatment of every diſeaſe which occurs, or they *are not*. If they are, the medical art is compriſed within a much ſmaller compaſs than I conceived, or indeed have found it to be, on peruſing ſome of the beſt books in every branch of the

the ſcience: and, ſo far as reſpects the ſtudy of it as a ſcience, I may, without preſumption, hold myſelf to be a tolerable judge.

If Dr. Buchan's compilation is ſufficient to enable an ordinary reader, male or female, to commence phyſician, the many years of ſtudy and application deemed hitherto to be indiſpenſibly neceſſary to the education of a phyſician, muſt have been totally miſapplied; and Dr. Buchan, and the reſt of his brethren who adopt his ſentiments, *if any ſuch there be*, ought, if they are honeſt men, to reſign their claims to practice, in favour, *I will not ſay of apothecaries*, but of every old woman who has abilities and patience ſufficient to *ſpell* the book. If theſe works *are not* ſufficient guides, and I did not require the preſent caſe as an evidence that they are not, I will venture to pronounce ſuch publications to be very injurious; becauſe they have a manifeſt tendency to encourage a dangerous ſpecies of empiriciſm, *now very prevalent*; by inſpiring a confidence of ſkill and ability which they cannot impart; and the author is therefore reſponſible for all the conſequences.[c]

[c] It is with reluctance I detail theſe *genuine* ſtrictures on the publication of a brother fellow of the ſame college; who, I believe,

B. Ignorance and preſumption are generally concomitant; and I believe, that men of the firſt abilities in the profeſſion, in proportion to the extenſion of their practice, their experimental conviction of the mani-

lieve, is a very reſpectable phyſician—*Amicus Plato, ſed magis Amica veritas.*—I am however perſuaded that the *Domeſtic Medicine* is a good compilation of modern practice; but addreſſed to perſons in whoſe hands it becomes a *dangerous edged-tool.* The only good purpoſe it is likely to anſwer, is its being a tolerable memorandum-book for apothecaries.

A very ingenious clergyman of my acquaintance tells me, that being an invalid, he ſome time ago read a part of Dr. BUCHAN's book, and finding himſelf ſtrongly impreſſed with an idea that he ſuffered under each ſucceſſive diſeaſe, as he proceeded, he thruſt the book into the fire, and with the *Domeſtic Medicine* diſmiſſed his imaginary maladies.

The ingenious Mr. COLMAN has, with exquiſite humour, exhibited the effects of medical reading on hypochondriacs, in the character of *Doily* in his farce of the *Spleen*; and I have no doubt but Dr. BUCHAN has contributed very much to increaſe the number of thoſe wretched beings.

No circumſtance has given me more pain from the anonymous epiſtolary ſcurrilities of the quacks, than their daring to inſinuate that I place Dr. BUCHAN on a level with thoſe wretches:—*nos poma natamus*; for no *candid* reader could draw any ſuch inference. I have taken the liberty to diſſent from reſpectable phyſicians in the courſe of theſe eſſays; but always, I hope, with candour and good manners.

The truth is, the nature of my plan required that I ſhould be explicit in my opinion of the injurious effects of ſuch publications as that of the *Domeſtic Medicine*; and I have had the pleaſure of convincing ſome gentlemen of learning of the impropriety of publiſhing ſuch books.

fold

fold difficulties which attend the inveſtigation of diſeaſes, and the mortifying diſappointments they meet with in their attempts to remove them, become daily more cautious and diffident; whilſt thoſe who have only *caught the eel of ſcience by the tail* unhappily conceive they have no difficulties to encounter.

This ſelf-ſufficiency is often, and indeed generally, the reſult of a falſe and erroneous analogy. If a lady doctor hears of a caſe in which a particular remedy has been ſucceſsful, ſhe uſes, and recommends it, on the faith of an ignorant relator, in every caſe which is ſuppoſed to be ſimilar; though it is more than probable that there is really no ſimilarity: or ſhe conſults the *Domeſtic Medicine*; and having compared the Doctor's deſcription of the diſeaſe with the patient's ſymptoms, preſcribes with great confidence. It may however, *unhappily for the poor patient*, happen, that in conſequence of ſome *ſmall miſtake* in analogy, the preſcription fails, much time is loſt, and the phyſician or apothecary is called in to rectify the conſequences of delay or miſmanagement, which is not always in his power.

Phyſicians

Phyſicians know, and often from painful experience, that ſuch is the diverſity of aſpect which diſeaſes aſſume, not only from difference of conſtitution, but in the various ſtages of their progreſs, and even from the untoward operation of medicines; that *no general deſcription of diſeaſes*, or *rules of practice*, which can be derived from books, will avail; but that, with all the aſſiſtance which ſtrict analogical reaſoning, grounded on extenſive experience, can afford them, they ſometimes err in aſcertaining the nature of the diſeaſe, and therefore neceſſarily in applying the means of relief.

In ſuch a dilemma, however, it will not be denied that they are better qualified to diſcern and rectify the error, than any of the *eléves* of Dr. BUCHAN's *ſchool*.

A. I heartily accord with you.

I ſhall conclude this chapter, by expreſſing my wiſhes, that the arguments I have urged, from the moſt diſintereſted motives, may make a proper impreſſion on my fair readers; and I do moſt earneſtly recommend to their

conſideration, whether, in thoſe inſtances where they venture to perform the duties and offices of the phyſician, *they are not in danger of incurring a breach of the ſixth commandment.*

ESSAY V.

BOOK I.

ON

REGIMEN.

Malim convivis quam placuiſſe coquis.
MART. EPIGR.

Eſt modus in rebus, ſunt certi denique fines
Quos ultra citrave nequit conſiſtere rectum. HOR.

CHAP. I.

Regimen defined—Objects of it—Advantages of it—Longevity, the Cauſes of it.

PROP. I. REGIMEN, IN A MEDICAL SENSE, IMPLIES THE GOVERNMENT OF OURSELVES WITH RESPECT TO WHATEVER CONCERNS THE PRESERVATION AND RESTORATION OF HEALTH.

§. 1. IN the following Eſſays I ſhall conſider *Regimen* under three heads.

1ſt. *That which reſpects the preſervation of health.*

2dly. *That which is employed in the cure of diſeaſes.*

3dly. *That kind of diet which is beſt adapted to eradicate, or at leaſt much alleviate, obſtinate and inveterate diſeaſes.*

§. 2. As it is impoſſible to cure a diſeaſe, unleſs by accident, if we do not underſtand its nature; ſo, to have an accurate idea of the nature and properties of regimen, we ought previouſly to comprehend thoſe circumſtances of the body and mind, which conſtitute the health of both; otherwiſe *regimen* muſt be empirical and irrational: nor can we adapt it to the cure of diſeaſes, without having ſome idea of their general nature; and as invalids often require, and are always gratified by, reaſons aſſigned for any circumſtance of regimen which may be preſcribed them; and, without ſuch information, are leſs diſpoſed to be implicit in their obedience, this Eſſay is planned with a conſtant reference to Eſſay I. juſt publiſhed;* and I may venture to aſſure the readers, that they will peruſe this with more ſatisfaction

* A Philoſophical Sketch of the Natural Hiſtory of the Human Body and Mind.——*N. B.* When I refer to Eſſay I. in the courſe of this work, I always mean the Philoſophical Sketch.

and

and inſtruction, after having given the Phiſoſophical Sketch a careful peruſal.

§. 3. Though the term *Regimen* is commonly applied to diet, yet it is much more comprehenſive; and is uſually compriſed under what is called the *Non-naturals*.

The *Non-naturals* are ſo termed, becauſe when beneficial to our bodies and minds, they are *according to nature*; and when injurious, they are *not natural*, or are *contrary to nature*. The term is rather quaint, but it is ſufficiently expreſſive. *Medicine* has been ſometimes ranked among the non-naturals; but as it ought never to be employed for the preſervation of health, which is a moſt eſſential purpoſe of Regimen, it is here totally omitted.†

The Non-naturals may be compriſed under the following heads.

† Medicine was formerly, but very abſurdly, employed for the prevention of diſeaſes; nor was this practice ſufficiently diſcountenanced even by phyſicians. In the laſt age, medicaſters were in the habit of diſciplining whole pariſhes every ſpring and fall, by bleedings, purgings, and diet drinks; much more to their own than their patients' emolument. But this practice is now, I believe, pretty much out of faſhion: it declined with the Lady *Bountifuls*, cowſlip wine, and plague water.

1*ſt*. *Foods* and *drinks*, adapted to the nouriſhment and ſupport of the body.

2*dly*. Such a degree of bodily or *muſcular motion*, as may ſuſtain and invigorate the internal motions of the machine, vital, natural, and animal.

3*dly*. *Reſt*, and ſuch a portion of ſound *ſleep*, as may reſtore that vigour to the body and mind which has been waſted by watching, and the neceſſary exertion of the bodily functions and mental powers.

4*thly*. The uſe of *air* ſufficiently pure to breathe with eaſe and comfort.

5*thly*. A due *defence* of the body againſt the inclemencies of weather and ſeaſons.

6*thly*. Such a regulation of the *appetites* and *paſſions* as may not diſturb the faculties of the mind, nor the organs of the body.

Theſe, excepting the 4th, already treated of Eſſay II. will be treated in due order; but as the firſt is the moſt important, it will be conſidered at large; for if we take into the account the diverſity of age, ſex, habit of body, and habit of life, even the preventive regimen muſt be very comprehenſive; but when extended to regimen under a great diverſity of diſeaſes, it muſt neceſſarily be much more ſo.

§. 4. As health is an invaluable bleſſing, the preſervation of it is of the utmoſt conſequence; and, next to the diſcharge of our moral and religious duties, ought to be the primary object of our care; becauſe the due performance not only of our ſocial obligations, but even of thoſe of a ſuperiour nature, muſt entirely depend on our enjoying a ſound mind in a ſound body.

How aſtoniſhing is it, therefore, that we very rarely obſerve a due mean between the moſt painful ſolicitude about health on one hand; or the moſt careleſs inattention to it on the other: either embittering the comforts of life, by our exceſſive anxiety about the preſervation of it, or ſo thoughtleſsly ſquandering the bleſſings of health, as if it were impoſſible we ſhould ever be able to exhauſt it!

There is a ſtrong propenſity in mankind to run into extremes: thus the *brawny petit maitre* ſhivers under the zephyr's breeze, and regulates his meal of *blanc mangé* by ſcruples and grains; whilſt the *flimſy buck*, maugre his conſtitutional warnings, *keeps it up* by every kind of exceſs, with the ſame propriety, as if he were to play a bout at quarter-ſtaff

quarter-ſtaff in a china-ſhop, or gallop his fiery hunter to the verge of Dover cliffs.

The inſtances of the benefit of regimen in the *preſervation* of health are ſo numerous and well atteſted, that it would be abſurd to doubt its efficacy; and though it cannot be denied, that a few perſons of *iron* conſtitutions, notwithſtanding great irregularities, have reached an advanced age; yet the inſtances are very few, when compared with thoſe of premature death from intemperance and riot.

It is a circumſtance worthy of notice, as it may contribute to the comfort of invalids, that long life is not neceſſarily connected with high health; for it is certain that many attain to a great age under a very delicate ſtate of health; whilſt neither the conveniences nor luxuries of life, with all their *apparent* advantages, are, by any means, peculiarly favourable either to the preſervation of health, or to the prolongation of life. The circumſtances which ſeem to have contributed chiefly to longevity are, being born of healthy parents; and ſimplicity of diet, earned by daily labour. Some very old perſons have lived for many years in great indigence,

digence; a proof of Lord VERULAM's obſervation, that intemperance of ſome kind or other deſtroys the bulk of mankind; and that life may be ſuſtained by a very ſcanty portion of nouriſhment: the gallant defender of Gibraltar lived eight days, during the ſiege, on four ounces of rice each day.

But longevity ought not to be the chief motive to a regular mode of life; but that, *whilſt we do live*, we may poſſeſs a ſound mind in a healthy body; a bleſſing, the want of which, cannot be compenſated by celebrity, rank, or fortune.

The proofs of the efficacy of regimen in the reſtoration of health are ſo numerous and unequivocal, that to recite them would be unneceſſary. I ſhall mention one inſtance only.

The celebrated LEWIS CORNARO, a noble Venetian, had ſo injured his conſtitution by intemperance, before his 46th year, that he could not have long ſurvived, unleſs he had ſpeedily adopted a regimen of diet, by means of which he was ſoon relieved from a dangerous and complicated diſeaſe, and enjoyed good health many years after: and in his 91ſt year, then enjoying the moſt perfect health,

health, publiſhed a lively and earneſt perſuaſive to temperance; exhibiting, in the moſt glowing colours, a very pleaſing picture of the wonderful effects of temperance on the body and mind. It is worthy of notice, that, as his gouty and other complaints were ſolely the effects of intemperance; ſo, in leſs than twelve months, regimen reſtored him to good health.

From this, and many other inſtances, the power of regimen is clearly evinced; and though it is certainly much more effectual, when united with ſuitable remedies, they rarely ſucceed without its aſſiſtance.

CHAP.

CHAP. II.

REGIMEN OF DIET.

Foods natural Stimuli to the Body—how diſtinguiſhed from Medicine and Poiſons—Repletion and Inanition—Repletion—Proportion of Stimuli to the Organs the great Source of Health—Danger of artificial Depletion or Evacuation.

PROP. II. REGIMEN OF DIET CONSISTS IN SUCH A REGULATION OF THE QUANTITY OR QUALITY OF OUR ALIMENTS, AS TO AVOID GREAT REPLETION, OR EXCESSIVE INANITION.

§. 5. IT has been remarked, Eſſay I. that foods being one of the natural *ſtimuli* of our organs of digeſtion, circulation, and nutrition; it is neceſſary, for their proper movements, that there ſhould be ſuch a proportion between them, that the ſtimuli ſhall neither abound nor be deficient.

Diet conſiſts of ſuch parts of *aliment* as are convertible into the nature of our bodies, without

without making any ſudden or great changes on our organs, or their functions; and therefore all ſuch things as do, as condiments of the ſtimulating kind, all fermented drinks and ardent ſpirits, ought to be uſed very ſparingly, and with great caution, by perſons in health; becauſe they approach too nearly to the nature of *medicines*, which, whilſt they produce great and ſudden changes in the body, are ſcarcely changed by it, or convertible into its nature.*

With reſpect to *poiſons*, there are few which can be juſtly deemed ſuch, in contradiſtinction either to foods or medicines; for as *even diet* may have noxious and deleterious effects, and ſome of our moſt powerful medicines may, if injudiciouſly uſed, have all the effects of poiſons; ſo, what have been deemed poiſons, are often convertible into ſafe and efficacious medicines.

* Some of the writers on dietetic regimen, and among the reſt Dr. ARBUTHNOT, have endeavoured to aſcertain the qualities of foods by chemical analyſis; but I have ever conſidered the attempt as precarious and fallacious: Some of them alſo have entered into a minute detail of the changes produced by diet on the ſolids and fluids; but if the diſtinction I have eſtabliſhed between diet and medicine be well founded, the ſenſible effects of foods or drinks can only be referred to their relative ſtimulating and ſedative powers, aſcertained by the ſecond table; and their degrees of digeſtibility, as connected with thoſe powers, and pointed out in the firſt table.

§. 6. The terms *Repletion* and *Inanition* are often uſed by writers on this ſubject.

By Repletion, I do not mean *overfulneſs*, but merely that quantity of nouriſhment which is neceſſary to ſupply the daily waſte of the body; and this is the genuine meaning of the word.

In eſtabliſhing dietetic regimen, the great point is to preſerve a due mean between fulneſs and emptineſs; that is, that the *natural ſtimuli*,* or nouriſhment, ſhall be ſufficient to act duly on their reſpective organs.—They may, however, deviate from this mean, even in health; either by their *bulk* being too great, as when a gluttonous meal ſuſpends the digeſtive power of the ſtomach; or a copious and rich chyle oppreſſes the circulating ſyſtem of perſons who are of full blood; or by their *ſtimulus*, as when condiments and fermented drinks excite the heart and other organs to violent and dangerous exertions, by which temporary or permanent fever may be produced. On the other hand, the *natural ſtimulus* may not be ſuffi-

* This term is explained in the Sketch of the Natural Hiſtory of the Human Body, &c. juſt publiſhed, Book I. chap. 2, page 10, 11.

cient,

cient, either from the quantity of food, taken into the ſtomach, not being ſuch as to give its coats proper tenſion; and the ſame may happen in the circulation, when the quantity of the chyle is too ſmall to add proper bulk to the volume of fluids, which is a chief cauſe of ſtimulus to the heart: or there may be a deficiency in the ſtimulating quality: but this rarely happens in health, though frequently in diſeaſe, as we ſhall ſee hereafter. In a due mean, therefore, between theſe extremes, conſiſts that proportion of ſtimuli to their organs, by which they are enabled to perform their functions with eaſe, ſteadineſs, and vigour.

Though the ordinary mode of receiving nouriſhment is by the mouth, yet there are other means by which the body has been nouriſhed on extraordinary occaſions; as by means of a nouriſhing bath, &c. when the patient has been unable to ſwallow. We may receive nouriſhment in ſome degree by the organs of ſmelling; hence the ludicrous deciſion of a Judge in favour of a cook, who, on his complaint that a hungry man gratified his appetite daily by the ſavoury ſteams of his kitchen, decreed, that the plaintiff

tiff ſhould be repaid by the ſound of the defendant's money.

That nouriſhment is indiſpenſibly neceſſary for reſtoring the waſte of the body, is ſelf-evident; and the reaſons are aſſigned in Eſſay I.; but, under certain circumſtances, the body prepares food for the ſuſtenance of others; as females during pregnancy, and whilſt they ſuckle their infant progeny. The milk of women has ſometimes been preſcribed for the ſuſtenance of the ſick; and the Grecian ſtory affords us a moſt pathetic inſtance of filial duty in the daughter of *Evander*, who ſuſtained her aged father by her own milk.

§. 7. *Repletion* neceſſarily implies a correſponding *depletion*, or evacuation of thoſe parts of our ſolids or fluids, which having become uſeleſs, and their place being ſupplied by freſh nouriſhment, ought not to be any longer retained. This uſeleſs or ſuperfluous matter is, as has been fully explained Eſſay I, diſcharged from the body by various outlets, and is one of thoſe operations of the conſtitution by which the healthy balance between the organs and their ſtimuli is ſupported; and though this balance be not always

ways exactly preſerved, yet the organs rectify ſmall deviations by their innate powers; nor ought we to interfere officiouſly by artificial evacuations, as is too frequently done, to the great injury of health; but if, from our feelings, we have reaſon to ſuſpect an occaſional fulneſs, it will be much more ſafe and natural to leſſen the quantity we take in by moderate abſtinence, than produce preternatural diſcharges by emetics, purgatives, &c. which ought never to be uſed but under abſolute diſeaſe: This caution is ſtrongly enforced by a celebrated ancient phyſician:* for medicine being, from its nature, more diſpoſed to change the conſtitution, than be changed by it; whenſoever it is taken in health, it muſt always make ſome change, which it never can do for the better: There is alſo another cogent reaſon for never uſing medicine, unleſs upon an urgent occaſion, viz. That by habituating the conſtitution to its ſtimulus in health, we ſhall loſe the benefit of it when we really want it.

* Cavendum ne præſidia adverſæ valetudinis in ſecunda conſumantur. CELSUS.

CHAP.

CHAP. III.

General Remarks on the relative digestibility of Foods and Drinks.

Relative Digeſtibility of Foods not eaſily aſcertained—Reaſons why—Modern Phyſicians leſs attentive than the Antients—Inaccuracy of Experiments—Opinions concerning the Nature of Digeſtion—Mode of conducting Experiments to aſcertain its Nature—Reſult of thoſe Experiments—Remarks on the order in which Foods paſs out of the Stomach—An Obſervation of Mr. Hunter's—not confirmed—Power of the Stomach eſtimated.

PROP. III. The relative digestibility of aliment consists in its solution in the stomach and bowels, and its ready assimilation into the nature of our bodies, for the purpose of nutrition.

§. 8. FOR a full explanation of this propoſition the reader is requeſted to re-peruſe Chap. I. Book iv. of the *Natural Hiſtory of the Human Body*, and more will

occur on this ſubject, in ſome ſubſequent parts of this eſſay.

We come now to the general obſervations on the table of the relative digeſtibility of foods; a ſubject attended with difficulty, owing to various circumſtances which I ſhall endeavour to explain; and though, in the performance of this taſk, ſome of the remarks may ſeem to arraign the accuracy of the experimenters and writers in this branch; yet my duty to the public obliges me to be candid and explicit.

1ſt. Modern phyſicians are leſs attentive to regimen, eſpecially of diet, than the ancients were, whoſe remedies being few, and ſome of them very violent in their operation, they relied much on regimen. So that whilſt every other branch of our art has been very much improved, regimen is ſtill very imperfect: for though ſeveral treatiſes have been publiſhed on this ſubject, yet the obſervations are rarely to be depended upon, being chiefly drawn from theory inſtead of experience: Thoſe authors being generally deficient in chemical knowledge, without which the nature of aliment cannot be underſtood, held

erroneous

erroneous opinions concerning the qualities of foods and drinks.*

2*dly*. Regimen has been leſs attended to, becauſe our patients are much leſs than formerly diſpoſed to conform to rules; partly owing to all ranks of men being more addicted to luxurious indulgence; and partly from an *empirical* ſelf-ſufficiency, which pervades every order in ſociety, and renders them leſs compliant with the injunctions of their phyſicians. Even when our patients are confined to their beds by a dangerous diſeaſe, our regulations are generally complied with reluctantly and partially; eſpecially when they are not conformable to the abſurd ideas and prejudices of relations, nurſes, and even of the patients themſelves; but when the diſeaſe is of a chronic nature, and the patient is not reſtrained from ſociety, the

* There is a work which was ſurreptitiouſly publiſhed as lectures of the celebrated Dr. CULLEN, and which often affords traits of that gentleman's chemical knowledge. I have occaſionally taken hints from that work, and ſhould have done ſo more frequently, had the authority been leſs diſputable; it were much to be wiſhed that the Doctor had given the public his own unadulterated opinions on this important ſubject. Dr. FALCONER has written a very uſeful little Treatiſe on Regimen of Diet under the uſe of Bath Waters, for which he was well qualified by his chemical knowledge.

force of former habits, and of example, is often too powerful to be reſiſted.

3*dly*. Phyſicians have alſo erred in inſiſting, with too much rigour, on a regimen, which they know will not be complied with; ſo that the patient either totally diſregards it, or diſmiſſes him, to employ one who is leſs rigid.

4*thly*. Thoſe who have made experiments to aſcertain the relative digeſtibility of foods, have either made them out of the body, or on brutes; and though of late, ſome experiments have been made in the human ſtomach by Dr. *Stevens*, the Abbé *Spalanzani*, and Monſ. *Goſſe*, the reſults have been different in ſeveral reſpects. The Abbé and Dr. *Stevens* made experiments on different animals; but thoſe which are moſt deciſive, are ſuch as have been made on dogs; as of all the brute creation, their digeſtive organs and powers ſeem to approach neareſt to ours.

I ſhall give a ſhort detail of ſome of theſe experiments, and ſome occaſional remarks from different authors.

§. 9. It may tend to amuſe the reader, to relate the manner in which theſe experiments were

were made.——It being inferred, from ſome experiments made out of the body, that digeſtion is performed by a fermentation not very different from that by which beers and wines acquire their intoxicating nature, it was ſuppoſed that the *vinous* proceſs, whilſt the foods remained in the ſtomach, was the moſt perfect; but that after ſome delay in the inteſtines, the contents acquired an alcaleſcent nature, tending to putrefaction;* and ſome have been of opinion, that a putreſcent tendency of the food even in the ſtomach is indiſpenſibly neceſſary to perfect digeſtion.

Theſe were ſuppoſed to be the changes which took place when digeſtion was perfect; but that when it was imperfect and depraved, the fermentation became *acetous*, that is, the foods became ſour; or the fermentation degenerated into the contrary extreme of putreſcency; or, in ſome caſes, no fermentation of any kind took place; but the foods continued in a crude, inert, glutinous ſtate.

Theſe opinions ſeemed to be founded on obſervation; for even in the moſt healthy, whether from exceſs in the quantity, or ſome

* See Eſſay I. book 4. remarks on digeſtion, p. 159.

fault in the quality, the foods, after producing great uneaſineſs and oppreſſion, and diſcharging much air, have been rejected, ſometimes ſo exceedingly ſour as to corrode the throat; at other times very bitter, offenſive, and putreſcent.

Theſe ſymptoms of depraved digeſtion occur very frequently in diſeaſes; and indeed there are very few diſeaſes in which the digeſtion is not more or leſs imperfect, and frequently depraved in a very high degree. (See Eſſay I. p. 211.) I ſhall have occaſion to reſume this ſubject.

§. 10. Dr. *Stevens*, then a ſtudent of phyſic at Edinburgh, having choſen digeſtion for the ſubject of his inaugural theſis, made various experiments, not only to aſcertain its nature, but to determine what foods were more or leſs digeſtible. He incloſed different kinds of food in hollow perforated ſpheres, that the gaſtric juices might be admitted to act upon the foods they contained. With theſe he firſt made experiments on brutes, chiefly ſheep, which he killed at different periods of digeſtion, to examine the changes the foods had undergone. He afterwards made

made his experiments on a foreigner, who procured a livelihood by ſwallowing ſtones and other indigeſtible matters.

§. 11. The Abbé *Spalanzani* made a variety of experiments on himſelf, and different kinds of quadrupeds and birds, by incloſing various foods in tubes and perforated ſpheres of wood, the reſult of which I have given Eſſay Iſt. page 163.

§. 12. Monsr. *Goſſe*'s experiments were made upon himſelf in a very ſingular manner. This gentleman has the peculiar faculty of diſcharging the contents of his ſtomach at will, by ſwallowing a certain quantity of atmoſpheric air, which, by ſtimulating the ſtomach, acts as an emetic. He therefore availed himſelf of this faculty, and having ſwallowed certain mixtures of foods for the ſole purpoſe of experiment, he had an opportunity of examining them in the different ſtages of digeſtion.

§. 13. To gratify the curioſity of the reader, I ſhall here give a brief detail of the reſults of the experiments in which they ſeem

to

to agree; and ſhall hereafter occaſionally take notice of ſome circumſtances in which they appear to have differed from each other: I ſhall only premiſe, that as theſe experiments were made on healthy ſtomachs, they afford us no information (one inſtance excepted) concerning the changes that take place in diſeaſe.—The reſults of theſe experiments were,

1*ſt*. In thoſe of the bird kind which have gizzards, as the turkey, gooſe, &c. digeſtion is performed by the muſcular force of the ſtomach, which is very great.

2*dly*. That in ſuch of the bird kind as live on inſects, worms, &c. as the buzzard, and ſea fowls, and in beaſts of prey, the gaſtric humours are the ſole agents in digeſtion.

3*dly*. That in the ruminating animals, as the ox and ſheep, the food, after being ſome time in the ſtomach, is thrown back into the mouth, and undergoes a ſecond maſtication; and that the gaſtric juices perform the reſt of the proceſs.

4*thly*. That in thoſe animals which live ſolely on vegetables, animal foods, after being many hours in the ſtomach, were found to be totally unchanged; and the

ſame

ſame with reſpect to vegetables, in thoſe animals which ſubſiſt on animal food; but that there are ſome animals of the domeſtic kind, as the dog, hog, and tame duck, which digeſt both kinds.

5*thly*. That the ſtomach of a healthy man is equally adapted to the digeſtion of both; that no kind of fermentation takes place in a healthy human ſtomach, though vegetables are apt to become ſour in a ſmall degree in the firſt ſtage of digeſtion; but if the acid tendency be not very great, it is corrected by the gaſtric juice, which in health is neither acid nor alcaline; but reſiſts putrefaction to ſuch a degree, that tainted meat, after being in the ſtomach for ſome time, becomes perfectly ſweet;—and that the inner coat of the ſtomach of all animals (and ſome other organs of particular animals) have a peculiar power of coagulating milk, though this power does not ſeem to depend on aceſcency.

6*thly*. The food in the ſtomach of a ſick buzzard was found to have an offenſive putreſcent ſmell, which ſhews that, under diſeaſe, the aliments may undergo changes very different from thoſe that happen in health.

7*thly*. Dr.

7thly. Dr. *Brugnatelli* has found, that in the gaſtric juices of herbivorous animals, there is a large proportion of volatile alcali and ſea ſalt; and in carnivorous animals, as the hawk, there is a peculiar acid, and a little ſea ſalt. He thinks it probable that there is a conſiderable difference in the principles of the blood and ſecreted humours in different animals.

8thly. *Walleus* found that the aliments paſſed the ſtomach into the inteſtines in the following order: *1ſt.* Milk in a very ſhort time, next recent vegetables, bread in about four hours, ſome kinds of fiſh in five, ſome kinds of meat in ſix or ſeven hours, and beef about the eighth hour. Sometimes bread, and at other times fleſh meats, have been retained much longer.

In a perſon who had an ulcer of the duodenum, the order in which the digeſted aliment paſſed from the ſtomach was accurately obſerved. Beer paſſed in two hours, fruits and vegetables in three hours, and bread and animal foods, eſpecially if eaten in too large a quantity, were retained nine hours.

Some articles of food, and other things, have been retained a very long time in the ſtomach,

ſtomach, even for weeks, months, and years; as ſome animal food for months; alſo fiſh, tripe, ſuet, oyſters, curd of milk, cheeſe, prunes, cherries, grapes, and peaſe, ſome of them for more than twelve months.

9*thly*. The very ingenious Mr. *Hunter*, having, from ſome appearances on diſſection, advanced an opinion that digeſtion continues after death, ſo long, and to ſuch a degree, as to diſſolve even a part of the ſtomach itſelf; theſe gentlemen did not obſerve any ſuch ſigns of diſſolution.

I have (Eſſay I. page 159.) made ſome remarks on digeſtion, to which I refer my readers; and ſhall conclude this chapter, by obſerving, that as health is relative rather than poſitive, and is different in different conſtitutions, ſo the digeſtion may admit of various degrees of perfection; and therefore that all the experiments hitherto made are too few, and too little diverſified, to afford us ſufficient information concerning the wonderful and inimitable proceſs of digeſtion.

Some of the mathematical phyſiologiſts have attributed to the ſtomach a contractile power equal to 534 lbs. but though it has a contractile power, it is not ſo conſiderable; the

the *pylorus* or lower orifice of the ſtomach contracts, and retains the foods till they have undergone a neceſſary degree of digeſtion, when all the muſcular fibres of the ſtomach contract and propel them.

TABLE

TABLE I.

Of the RELATIVE DIGESTIBILITY *of* FOODS.

ANIMALS.

A. *Wild.*
1 Veniſon
2 Hare
3 Red Game
4 Woodcock
5 Snipe
6 Pheaſant
7 Partridge
8 Quail
9 Teal
10 Plover
11 Black Game
12 Pigeon
13 Pork, Wild Hog
14 Wild Duck
15 Tame Duck
16 Gooſe
17 Marrow
18 Oil
19 Suet

B *Tame.*
1 Mutton
2 Beef
3 Rabbit
4 Goat
5 Turkey
6 Gallina
7 Capon
8 Hen
9 Cock

C. *Salted Meats.*
1 Salted Beef
2 Mutton Ham
3 Beef Ham
4 Tongue
5 Bear Ham
6 Pork Ham
7 Salt Fiſh

D. *Young Meats. &c.*
1 Kid
2 Chicken
3 Lamb
4 Veal
5 Tripe
6 Pig
7 Eggs
8 Jellies
9 Brawn

E. *Milks.*
1 Rennet Whey
2 Human Milk
3 Aſs's Milk
4 Mare's Milk
5 Butter Milk
6 Cow's Milk
7 Sheep's and Goat's Milk
8 Cream
9 Butter
10 Old Cheeſe
11 New Cheeſe

F. *Shell-Fiſh.*
1 Oyſter
2 Shrimp
3 Crab
4 Lobſter
5 Muſcle

G. *Fiſh.*
1 Whiting
2 Haddock
3 Perch
4 Mackarel
5 Sole
6 Flounder
7 Plaiſe
8 Cod
9 Pike

10 Dory
11 Piper
12 Carp
13 Tench
14 Mullet
15 Gudgeon
16 Trout
17 Herring
18 Brill
19 Turbot
20 Salmon
21 Eel
22 Turtle
23 Sturgeon
24 Skate

VEGETABLES.

H. *Fruits.*

1 Strawberry
2 Raſpberry
3 Currant
4 Grape
5 Cherry
6 Gooſeberry
7 Nectarine
8 Peach
9 Apricot
10 China Orange
11 Pine
12 Medlar
13 Pear
14 Apple
15 Melon
16 Plumb
17 Quince

I. *Dried Fruits.*

1 Prune
2 Currant
3 Raiſin
4 Fig

K. *Eſculent Vegetables.*

1 Aſparagus
2 Artichoke
3 Skirret
4 Turnip
5 Carrot
6 Parſnip
7 Pumpkin
8 Spinach
9 French Bean
10 Brocoli
11 Cauliflower
12 Potatoe
13 Jeruſalem Artichoke
14 Colewort
15 Cabbage

L. *Grains.*

1 Rice
2 Barley
3 Oats
4 Rye
5 Wheat
6 Millet
7 Biſcuit
8 Brown Bread Wheaten
9 White Bread Wheaten
10 Old Bread
11 New Bread
12 Vermicelli
13 Sago
14 Tapioca
15 Chocolate
16 Paſtry

M. *Pulſe.*

1 Peaſe
2 Beans

N. *Nuts.*

1 Almond
2 Walnut
3 Cheſnut
4 Hazel Nut

O. *Sallads.*

1 Creſſes
2 Celery
3 Lettuce
4 Endive
5 Truffle
6 Morell
7 Cucumber

P. *Pot-herbs.*

1 Parſley
2 Thyme
3 Leek

4 Chive
5 Onion
6 Shalot
7 Garlick

Q. *Condiments.*
1 Sugar
2 Fruits preſerved with ſugar
3 Salt
4 Olives
5 Vinegar and Pickles
6 Lemon Juice
7 Horſe Radiſh
8 Muſtard
9 Fruits preſerved with brandy
10 Cayenne Pep.
11 Pimento and other Spices

TABLE II.

Of the RELATIVE STIMULATING *and* SEDATIVE QUALITIES *of* FOODS *and* DRINKS.

CLASS I. STIMULANTS, ANIMAL.

ORD. I. MILKS, E. from No. 1 and 9, 11.

ORD. II. Genus 1. *Young Meats*, D.
Gen. 2. *Fiſh*, G. 1 to 6.

ORD. III. Gen. 1. *Fiſh*, G. 7 to 16.
Gen. 2. *Tame Animals*, B.
Gen. 3. *Shell Fiſh*, F.

ORD. IV. Gen. 1. *Fiſh*, G. 17 to 24.
Gen. 2. *Wild Animals*, A. and No. 10, E.
Gen. 3. *Salted Meats*, C.

CLASS

CLASS II. SEDATIVES, VEGETABLE.

H. I. K. L. M. N. O. P. Q.

CLASS III. LIQUID FOODS.

Gen. 1. *Liquid Animal Foods*, Broths & Jellies.

Gen. 2. *Liquid Vegetable Nouriſhment*,

A. From Domeſtic Grains.

B. From Foreign Vegetables, Tea, Coffee, &c.

CLASS IV. STIMULANTS, VEGETABLE.

O. Pot-herbs. P. Condiments.

CLASS V. DRINKS.

ORD. I. *Sedative—Water.*

Gen. 1. Ice
2. Rain
3. River
4. Spring
5. Stagnant
6. Diſtilled

} Waters.

CLASS

CLASS VI. Drinks.

Ord. II. *Fermented Drinks.*

Gen. 1. Barley Wines, Beers and Ales
2. Honey Wines, or Mead and Metheglin
3. Fruit Wines, as Cyder and Perry
4. Other Home-made Wines
5. Foreign Wines.

Ord. III. *Ardent Wines.*

Gen. 1. Rum
2. Brandy
3. Arrack
4. Liqueurs and Cordials.

CHAP. IV.

ON THE

RELATIVE DIGESTIBILITY OF FOODS.

*Aliment what—Preparation generally neceſſary—Cookery a Branch of Chemiſtry—why Digeſtibility of Foods not eaſily aſcertained—Digeſtion a very extenſive Operation of the Animal Oeconomy—Perſpirability what—*Sanctorius's *Experiments—Perſpiration how connected with Digeſtion—with Hunger and Thirſt—Inferences—Principles and Properties of Animal and Vegetable Food compared—Digeſtibility of Animal Foods—Arrangement of the Tables—Explanation of them.*

PROP. IV. OUR ALIMENTS ARE EITHER VEGETABLE OR ANIMAL, SOLID OR LIQUID, OF DIFFERENT NATURES AND QUALITIES, PREPARED BY VARIOUS ARTS OF COOKERY, AND MIXED WITH DIFFERENT CONDIMENTS, FOR THE PURPOSE OF RENDERING THEM PALATABLE, DIGESTIBLE, AND NUTRITIVE.

§. 14. BY the term *aliment*, we mean whatever is capable of nouriſhing the body: ſome drinks are not ſtrictly alimentary

alimentary, yet as they are neceſſary to promote the preparation of our nouriſhment, they cannot be omitted in a treatiſe on dietetic regimen; a place therefore is aſſigned them in the ſecond table.

Mankind in general, either from perſonal experience, or from prepoſſeſſion or prejudice, entertain ſuch different opinions on the relative digeſtibility of foods, that I do not expect that the arrangement of the firſt table will be univerſally approved of, even by medical men: It will however be of ſome uſe, at leaſt ſo far as to make the occaſional references more eaſy and intelligible; as I have marked each ſection with a different letter, and each article with a different number.

In compliance with the opinion of others, I have made ſome alteration in the arrangement, and have added ſome articles which had been omitted: many more might have been added, which are uſed by different nations; we learn from *Hippocrates*, that the ancient Greeks ate horſes, aſſes, dogs, and foxes; the Romans deemed rats a delicacy; and our neighbours the French eat frogs.

Before I proceed to the explanation of the table, I ſhall offer a few remarks.

We know of no articles of food in common uſe, that are not either vegetable or animal, though ſome of the condiments, as ſalt, are mineral: foods are rarely uſed without ſome preparation.

The art of cookery is a branch of chemiſtry; and though it be uſeful for the preparation of our foods, it is certain that the refinements of luxury have rendered it very injurious to the health of man, eſpecially by an improper uſe of condiments.*

Condiment means a preſerve, or whatever has a power of preventing corruption or putrefaction, but they are chiefly uſed to give a reliſh to our foods.

It may be admitted as a general truth, that, ſuch is the ſympathy between the palate and ſtomach, that what is ungrateful to the former is not very digeſtible. Some obſervations on the nature of digeſtion and nutrition have been given, Eſſay I. §. 71, p. 159. §. 74, p. 169, and §. 83, p. 181, to which I

* On converſing with my ingenious friend Dr. *Saunders*, he informed me that he had ſome intention to publiſh an Eſſay on the preſent modes of cookery, wherein he ſhould point out the impropriety of certain mixtures and ingredients in our modern diſhes; and from the Doctor's profound knowledge of chemiſtry, I am perſuaded no man is better qualified for the taſk.

refer

refer the reader, as a careful peruſal of them will render the ſubſequent part of this Eſſay more intelligible.

The ſtomach does not produce the chief changes on the aliment, though its effects on the ſtomach are chiefly attended to; becauſe on account of the ſenſibility of its nerves, it is, as it were, the centinel of the body, and warns us by its diſagreeable feelings, whenſoever its nerves are affected by the improper quantity or quality of our foods and drinks: and it is peculiarly incumbent on the invalid to attend to this monitor; becauſe we may be aſſured that when they are ungrateful to the ſtomach, not only its digeſtion, but that of the inteſtines, muſt be imperfect. After the chyle enters the blood, it may be truly ſaid to undergo farther digeſtion by the preſſure and agitation of the heart and lungs, and to be gradually ſubtilized, by paſſing through arteries, many of which are ſmaller than the fineſt hair. By this proceſs, which probably requires ſome days before it is perfected, the nutritious particles are comminuted into a ſubtile vapour, fit to pervade or cling to, and unite with, the minuteſt veſſels, and fill up the vacuities left by the ſolid

ſolid particles which have been waſhed off by the tide of fluid; and which are ſo minute as to paſs off by perſpirable veſſels, 125000 of which may, it is ſaid, be covered with a grain of ſand.

§. 15. There is a term, *perſpirability*, which has been uſed by ſome authors, which I ſhall explain here, as I may occaſionally make uſe of it.

Sanctorius, an Italian phyſician of the laſt century, made uſe of a ſtatical chair in which he weighed himſelf at different times after his meals; that he might know how much he had loſt or gained, and what foods were retained longeſt in the body, or ſooneſt diſcharged from it by the different excretions; and what the proportion of thoſe excretions was with reſpect to each other. Hence he inferred, that certain foods were more *perſpirable* than others; that is to ſay, that a greater proportion paſſed off by perſpiration, than by the other excretions. Similar experiments have been made by other phyſicians, but the principle on which they were made was in ſome reſpects fallacious.

Let

Let us ſuppoſe, for example, that the ſage experimenter, having made a hearty meal of mutton at dinner, a kind of food which *Sanctorius* found, as he believed, to be the moſt perſpirable, and weighed himſelf eight or ten hours after; it was impoſſible to determine how far the mutton was the cauſe of the increaſed perſpiration.

Or, ſuppoſe that one of the ſtatical doctors ate pork one day, and found his perſpiration to amount to twenty ounces; the next day beef, and the perſpiration thirty ounces; and mutton the third, when the perſpiration amounted to forty ounces; it was impoſſible to determine which of theſe were moſt perſpirable; becauſe it is probable that the ultimate preparation of the food muſt require a proceſs of ſeveral days before it can be ſo aſſimilated and ſubtilized, as to fill up the very ſmall vacuities of the abraded ſolids, (See Eſſay I. chap. iv. page 181.) and that many more days muſt elapſe, before theſe very particles are worn out, rubbed off, and diſcharged by inſenſible perſpiration: ſo that the day on which the doctor made a meal upon his *perſpirable* mutton, it is moſt likely he was perſpiring the remains of a meal he had eaten a month or ſix weeks before.

But beſide the ſtatical balance, *Sanctorius* uſed his feelings as a teſt of the relative perſpirability of foods; that is, he found that his perſpiration was always proportionably greater, when he found himſelf light, alert, and free from all uneaſy ſenſations, after particular foods; and the reverſe after others: This merits explanation.

There is a very ſtrong ſympathy between the nerves of the ſtomach, and thoſe of the ſkin; and therefore the perſpiratory diſcharge is very much under the influence of the ſtomach.

When he ate mutton, which was a food peculiarly grateful to the nerves of *his* ſtomach, his feelings were pleaſant, and his perſpiration copious; when he ate pork, muſhrooms, or melon, he was heavy and oppreſſed; and found, by the balance, that his perſpiration was diminiſhed one half; owing to the ungrateful ſenſation of the ſtomach being communicated to the nerves of the ſkin, by which a ſpaſmodic conſtriction of the exceedingly minute veſſels took place, and a ſtoppage of the perſpirable matter, ſimilar to what happens at the commencement of a fever. (See Eſſay I. p. 144, 146, &c.)

An

An example taken from diſeaſe will illuſtrate this farther. If you give a hectic patient a few boiled turnips for dinner, no oppreſſion will follow; if he eats a dinner of mutton, his ſtomach will be oppreſſed, his fever increaſed, and his inſenſible perſpiration will undoubtedly be diminiſhed. How does this happen? From the ſtimulus of the animal food imparted through the nerves of the ſtomach to the nerves of the heart and ſkin, and exciting a temporary fever. What is the effect of this meal in all the ſubſequent ſtages of digeſtion? As all the organs are weak, and the mutton is more difficult of digeſtion than the turnips, the chyle prepared from it will be crude; and as a very ſmall portion of it, if any, can be converted into nouriſhment, or will be fit to paſs the minute pores of the ſkin, it will be morbidly determined either on the kidneys or inteſtines, and paſs off in the form of half-digeſted chyle.

Let us ſuppoſe again that a debilitated gouty patient, whoſe ſtomach is cold and weak, eats boiled tripe one day, and roaſted mutton the next. The tripe will not ſit ſo eaſily as the mutton, becauſe it does not ſtimulate

ſtimulate the nerves of the ſtomach ſo gratefully, and the perſpiration will not only be much leſſened, but it will be digeſted with more difficulty, and neither afford ſo much nutrition or perſpirable matter.

Hence we may comprehend the intimate connection between perſpiration and digeſtion.

There is alſo a connexion between digeſtion, perſpiration, hunger, and thirſt.

When foods or drinks are either eaſy of digeſtion, or contain but few nutritive particles, they are ſooner converted into nouriſhment, and reduced into the fine perſpirable vapour; and the returns of hunger are more frequent. Thirſt, on the other hand, is only excited, either to dilute the alimentary particles in the firſt ſtages of digeſtion, or to carry off the uſeleſs and acrid particles of the ſolids and fluids through the bowels, kidneys, or ſkin.

Hunger and thirſt, therefore, are not excited merely to fill the ſtomach when empty, nor to ſupply the waſte of two or three pounds of fluids, which have been carried off by the excretions; but, by a neceſſary law of the ſyſtem, to force us to ſupply the means of

of preparing a mild, bland chyle, to correct that alcaleſcency and acrimony of the humours, which they are perpetually contracting from heat, agitation, and high aſſimilation to the animal nature, and which always partakes of the nature of putrefaction; and hence it is that animals which have been ſtarved to death, were not deſtroyed merely becauſe the waſte of the ſolids was not ſupplied; but chiefly by a putrefactive acrimony of the humours; and hence it is that life is prolonged in thoſe caſes, if they are allowed a ſufficient quantity of water *only*, to retard the putreſcent tendency.

From what has been ſaid we may draw the following inferences:

1*ſt*. That perſpiration is a moſt important excretion; becauſe if the aliments are not refined by the digeſtive powers into that ſubtile vapour, digeſtion muſt be imperfect: Hence the ſenſe of *lightneſs* when the perſpiration is copious, which ſhews that not only digeſtion, but all the other functions, are performed with eaſe and ſteadineſs. (See Eſſay I. page 185, &c.)

2*dly*. That thoſe foods and drinks which ſet eaſieſt on the ſtomach, muſt, whatever be their

their quality, be the propereſt for us; and that though ſome foods may be *abſolutely* more digeſtible than others; yet their *relative* digeſtibility muſt depend upon their impreſſion on the digeſtive organs.

It is a juſt and important obſervation of *Sanctorius*, that robuſt perſons diſcharge the remains of their nutriment chiefly by perſpiration; the weak chiefly by the kidneys or bowels: but the moſt deplorable ſtate of weakneſs is, when it paſſes off in the form of indigeſted chyle. This remark ſuggeſts a variety of uſeful hints in the management of invalids, not only with reſpect to diet, but clothing, &c.

3*dly*. That the diviſion of foods into ſtimulating and ſedative, eſtabliſhed by the ſecond table, is much more important than the firſt; becauſe theſe qualities, in exceſs, contribute very much to impair health; and on the other hand, by a due regulation of them, as will be ſeen hereafter, regimen of diet becomes a moſt uſeful, and even neceſſary auxiliary to medicine in the cure of diſeaſes.

4*thly*. It ought, however, to be ever held in mind, that it is by exceſs in quantity, chiefly,

chiefly, that we lay the foundation of manifold diſeaſes, eſpecially of thoſe foods and drinks which are poſſeſſed of highly ſtimulating qualities; and that a regular practice of temperance, in the uſe of the nonnaturals, is the only infallible noſtrum for the prevention of diſeaſe.

§. 16. I have, in this edition, added a ſecond table, which, ſo far as regards the general arrangement, is not very different from the firſt; though the titles, and in ſome reſpects, the modes of explanation are changed, as more conformable to the phyſiological and pathological remarks of the firſt Eſſay, to which I make frequent references, as tending to render this Eſſay on Regimen more intelligible.

I have however left the firſt table nearly as in the former edition, that my readers might have both arrangements before them, the firſt being more intelligible, the ſecond more ſcientific. I had another reaſon for adding the ſecond table, which was, that ſeveral of the articles, eſpecially the drinks, could not ſo well be arranged under the head of digeſtibility, which implies nouriſhment, of which

which they contain but a ſmall proportion; though they have other qualities which merit diſtinction: I have transferred my remarks from the firſt to the ſecond table, not omitting however ſuch remarks on the relalative digeſtibility as might be uſeful.

In each ſection of the firſt table, the moſt digeſtible is placed at the top, the leaſt ſo at the bottom: Thus in §. A. *veniſon* is the eaſieſt, and *gooſe* the moſt difficult of digeſtion, of that ſection only; for little uſeful information could be gained by carrying the compariſon on between ſection and ſection. Though the arrangement in the table is tolerably exact, yet we often meet with ſuch conſtitutional peculiarities, owing probably to the ſtate of the nerves of the ſtomach, as to render ſome foods, which in their nature are not very digeſtible, very much ſo to particular perſons, and the reverſe; and cuſtom ſeems to have a conſiderable ſhare in theſe peculiarities, as indeed it has in all the operations of the animal machine; and thereby creates many exceptions to general rules.

§. 17. If we conſider the general properties of animal foods, we ſhall find them to

to be alcaleſcent in various degrees, and therefore oppoſite to the aceſcent tendency of vegetable foods; and as the ſalt of the animal foods is partly volatile, and reſembles that of crude ſal ammoniac, ſo the eſſential ſalt of the nutritive vegetables is chiefly ſugar. Animal foods have a ſtrong diſpoſition to putrefaction; whilſt the tendency thereto in vegetable foods is very ſlow, being checked by the acid and ſugar, which are very oppoſite to putrefaction. They both have an oily matter; and, what is ſingular, that of animals is found to contain a conſiderable quantity of acid, and is the only animal ſubſtance that does ſo. They both contain a gelatinous matter, which in animals is called the coagulable lymph; and in both contributes to form the nutritious particles: ſome vegetables alſo contain a gluey matter called ſtarch, to which there is no principle in animals preciſely ſimilar.

There are ſome other circumſtances by which they are diſtinguiſhed from each other. It is probable that the air contained in animal foods is chiefly inflammable; that of vegetables is probably that ſpecies of acid now termed fixible air.

Animal

Animal foods, ſome very hard and tough parts excepted, ſeem to diſſolve entirely in the ſtomach; whereas ſeveral of the vegetables ſeem not to be ſoluble, but only give out their juices by a kind of infuſion.

Animal foods are ſtimulant; that is, they, with a very few exceptions, by their action on the nerves of the ſtomach, excite a temporary fever, called the fever of digeſtion; whereas vegetable aliment, whilſt in the ſtomach, is rather diſpoſed to check than to excite this fever. This fever of digeſtion, which, though originating in the ſtomach, is extended to every part of the body, is not, when moderate, injurious to the body, whilſt in health; but affords a principal ground for indications of regimen in particular temperaments, and in certain diſeaſes; and, as will appear hereafter, is the grand teſt by which we may determine whether ſtimulating or ſedative diet is beſt adapted to the nature of the habit or diſeaſe; for if morbid ſtimulus be exceſſive, ſedative foods are indicated, and the contrary.

The ſame diſtinction may be made between the ſtimulating and ſedative drinks.

§. 18. As

§. 18. As animal foods hold the firſt place in the tables, it may be proper to make ſome general obſervations upon them, eſpecially reſpecting their digeſtibility, to avoid repetitions, when I come to conſider them individually; and the reader is requeſted to obſerve, that where they are not contradicted by exceptions, they are ſuppoſed to be valid.

1*ſt*. The larger the animal, the ſtronger and more alcaleſcent the food; but not always therefore the leſs digeſtible; becauſe ſuch foods are generally the moſt eaſily diſſolved by the juices of the ſtomach, which (as has been ſeen, Eſſay I. page 164) are of an alcaline nature.

2*dly*. Some parts of animals are more tender than others, and therefore more eaſily diſſolved by the digeſtive powers of the ſtomach; as the head, tongue, udder, and thoſe muſcular parts which lie neareſt the bones: others are deemed more difficult of diſſolution; as the external muſcles, their tendons, the ſtomach and bowels, commonly called *tripe*, the ligaments which unite the joints, and the cartilages or griſtles: Theſe laſt, however, are the moſt proper foods for per-

ſons of ſtrong ſtomachs and quick digeſtion, not only becauſe they afford a conſiderable portion of good nouriſhment, but becauſe ſtrong ſtomachs digeſt ſo quickly, that it would be very hazardous to ſuch perſons who make blood very faſt, to throw a large quantity of rich nouriſhment into the circulation at once; as by the great ſtimulus of a rich and denſe blood, very dangerous fevers might be produced in conſtitutions ſo much diſpoſed to high and inflammatory fevers: Hence it is that the ploughman is more properly, and more ſafely, fed on ruſty bacon, than on the more digeſtible foods, provided it be duly qualified by vegetables.

3*dly*. The fleſh of the ox, and other four-footed animals, is heavier than that of birds; but, if more alcaleſcent, it will be more digeſtible.

4*thly*. The meat of wild animals, though harder and more dry than that of the tame animals, is more digeſtible; becauſe more diſpoſed to alcaleſcency and putrefaction; and therefore acts more gratefully on the nerves of the ſtomach, whoſe power in promoting digeſtion is very great.

5*thly*. The

5*thly*. The animal food which affords moſt nouriſhment is not always the moſt eaſy of digeſtion: The reaſon of this is, that the mucilaginous parts, which are the moſt nutritive, do not, in general, ſeem to be grateful to the nerves of the ſtomach; and hence it is that the fleſh of young animals, and jellies extracted from the fleſh of old animals, are often very diſagreeable and oppreſſive to the ſtomach. Hence it is that phyſicians make a proper diſtinction between the abſolute and relative nouriſhment of foods. The *abſolute* is, when in a pound of one kind of food there are more nouriſhing particles than in the ſame quantity of another. The *relative* is that kind or quality which is moſt digeſtible by the ſtomach. Thus a pound of jelly contains more nutriment than a pound of beef; but if the latter be more eaſily prepared by the ſtomach, and paſs through the other digeſtions in a ſhorter ſpace of time, it is relatively, though not poſitively, more nutritive; a circumſtance which, though with reſpect to ſtrong ſtomachs is of very little conſequence, is nevertheleſs, as we ſhall ſee hereafter, of the utmoſt importance with regard to invalids.

It might be ſuppoſed that ſuch foods as are, as it were, half aſſimilated or converted into nouriſhment, muſt be moſt digeſtible and nutritive, as all liquid foods; but this is not always the caſe; for more depends on their being grateful or offenſive to the nerves of the palate and ſtomach, than to any other circumſtance;—a diſtinction of great importance, but very little attended to.

6thly. Fiſh, which contain much of this mucilaginous matter, are not (though there are ſome exceptions) ſo digeſtible as fleſh: of the fiſh, thoſe of rivers are, by ſome, preferred to pond, lake, or ſea-fiſh.

7thly. Of the animals which are termed carnivorous, or thoſe which prey on other animals, as the lion, tiger, &c. and thoſe which live on inſects or fiſh, few are uſed as food; becauſe they are ſuppoſed to be too alcaleſcent and putreſcent: yet it is aſſerted that the fleſh of the young lion is as delicate and palatable as that of lamb.

8thly. Thoſe animals which feed themſelves, and are therefore confined to their natural food, are juſtly ſuppoſed to afford more wholeſome nouriſhment than thoſe that are ſtall-fed or crammed; becauſe, being deprived

prived of their natural exerciſe, their juices cannot be ſo well aſſimilated.

9*thly*. Thoſe animals that feed on plants which have active medical principles, do not afford ſuch bland and natural nouriſhment as thoſe which do not: Thus ſome goats feed on ſcammony, and ſheep on thyme and wormwood. The reaſon of this objection is, that all our foods ought to be as remote as poſſible from medical qualities: on this is grounded the objection to condiments and ſtrong drinks.

10*thly*. Certain foods are ſaid to be in or out of ſeaſon. This opinion is often regulated by faſhion: but the proper time for uſing particular animal foods, is when their natural nouriſhment is in greateſt plenty.

11*thly*. Animal foods that are the leaſt perſpirable afford the moſt permanent nouriſhment, or, as the vulgar term it, *ſtick to the ribs*; and produce a rich, denſe, elaſtic blood. Hence it is that our labouring poor are leſs vigorous, and therefore unable to do ſo much work, ſince the price of proviſions has ſo much exceeded that of labour, as to deprive them of a proper quantity of animal food.

§. 19. Having made theſe general remarks, it may be proper to offer a few more remarks on the Second Table.

It conſiſts of ſix claſſes, divided into ſtimulants and ſedatives; and as the articles of Table I. even of the ſame column, may be different in degree either of ſtimulating or ſedative quality, I have ſelected them according to thoſe degrees, and placed them under different orders and genera: Thus under Order II. Gen. II. I have placed only ſix of the fiſhes, G. Table I. becauſe, conceiving that thoſe which follow are of a nature more highly ſtimulating, I have placed them under other genera.

N. B. The reader will obſerve, that as I have placed the moſt digeſtible at the top of each diviſion in Table I. ſo I have placed the leaſt ſtimulating firſt in Table II.

With reſpect to the vegetables, the difference between the ſedative qualities of what may be deemed the nutritive vegetables is ſo ſmall, that it would be improper to perplex the reader with minute diſtinctions. Claſs IV. or the ſtimulating vegetables, are not, in truth, nutritive; but merely accidental additions, as ſauces or condiments.

Though

Though this arrangement is more ſcientific, and apparently more complicated, than that in the firſt edition; yet ſo far as regards regimen of diet under diſeaſes, which is the moſt eſſential, it will be found, on a careful peruſal, to be much more uſeful.

To render the references from the 2d to the 1ſt Table more eaſy; every ſection of the 1ſt Table is numbered 1, 2, 3, &c. which are referred to from the 2d Table by correſponding numbers.

To avoid prolixity, I have made a few remarks only on particular articles; and with reſpect to ſuch as are not mentioned, it is to be ſuppoſed that there is nothing peculiar in their nature.

The reader will remember, that all of the ſame Claſs, Order, and Genus, muſt be ſimilar in kind, though not in degree.

§. 20. The reader may recollect, that the morbid affections of the animal, vital, and natural functions have a very intimate connection, either with exceſſive, irregular, or defective ſenſibility; or with various degrees of exceſs, deficiency and irregularity of the circulating, ſecretory, and excretory ſyſtems.

tems. In conformity, therefore, to this idea, the Claſſes and Orders of the ſecond Table have been divided into ſtimulants and ſedatives. This diviſion, however, relates more immediately to morbid affections of the circulation, ſecretion, and excretion, than to thoſe of ſenſation; one Claſs only excepted, viz. the ſtimulating drinks, and ſome of the condiments; and their operation ſeems to depend on the grateful and *ſudden* impreſſion they make on the nervous ſyſtem in general, through the nerves of the ſtomach; and, in this point of view, they ought rather to be deemed uſeful nervine medicines, than articles of diet. That this diſtinction may be better underſtood, the reader is referred to Eſſay I.

CHAP.

CHAP. V.

ANIMAL STIMULANTS.

Animal Stimulants—divided into one Claſs, Orders, and Genera—Properties of each Genus—Qualities of certain Articles of each Genus explained.

CLASS I.

ORDER I. TABLE I. E. NO. 1 to 11.

§. 21. *MILK*, being immediately ſtrained off from the blood, ſoon after the new chyle enters it, approaches nearer to the nature of chyle than any other humours of the body, and very much reſembles the emulſions artificially made from the almond, and other oily nuts. Hence it is of conſequence that the diet of nurſes ſhould be ſo regulated that there be a due proportion of vegetables mixed with their animal food: liquid foods increaſe the quantity of milk. Nurſes ought not to faſt long; otherwiſe their

their milk will be too alcaleſcent; and I have known an infant to refuſe the breaſt with diſguſt, when the mother had faſted ten or twelve hours; becauſe, in this caſe, the milk, inſtead of being ſecreted from the chyle, is ſecreted from the blood; and therefore partakes of that diſagreeable pungency and flavour, of which all the other animal ſecretions partake in different degrees.

As an article of food, new milk is preferable to that which has ſtood ſome time; hence infant animals receive it immediately from the mother.

Rennet whey is placed at the head of the column, becauſe it is certainly the moſt ſedative and digeſtible; and being aceſcent, much fitter as a food for weak ſtomachs, eſpecially in hectic fevers; as it contains leſs of the groſs matter, and ſufficient of the ſugar to afford nouriſhment; and from experience I aver, that either this, or butter-milk, are much preferable even to aſſes milk, as an article of food for invalids: for none of the milks are ſo eaſily aſſimilated by the ſtomach as the wheys, broths, or even ſome ſolid animal foods; though milk may often be preferable to the latter, becauſe it is rather ſedative than ſtimulating;

ſtimulating; and therefore a fit accompaniment for vegetable diet. Goat's whey has been deemed preferable to the others; but this perhaps depends rather on the ſalubrity of the air in mountainous countries, than on the ſuperior goodneſs of the paſture. Of the milks, ſome have leſs curd than others; and theſe, as foods for invalids, are to be preferred, in the order of the catalogue: No. 7 being the leaſt digeſtible. Some think that milk boiled and ſweetened with ſugar is more digeſtible than the raw: milk always ſeparates into curd and whey in the ſtomach: of all the animal ſubſtances it is moſt diſpoſed to become ſour. Milk and fiſh do not agree when combined in the ſame meal.

Cream is a combination of the oil, curd, and ſugar of milk; or an imperfect butter.

Butter is an imperfect animal oil. It has been a kind of faſhion to reprobate butter as a very improper food, very ſlow of digeſtion, and apt to become rancid in the ſtomach; and farther it is alledged, that it generates groſs and foul humours. I ſhall conſider how far ſome of theſe charges are well grounded in another chapter; and ſhall only remark here, that it ſtrongly reſiſts aceſcent fermentation;

fermentation; is, by the conſent of almoſt all nations, uſed with vegetables and fiſh; and therefore muſt have ſome qualities favourable to the digeſtion of particular foods.

New Cheeſe is certainly a very indigeſtible food, as it is nothing more than hard curd, which the powers of the ſtomach can ſcarcely diſſolve.

ORD. II. Gen. I. *Young Meats.* Table 1. D.

§. 22. Theſe are more ſtimulating than the milks; but, from experiments, there is reaſon to believe that they are more difficult of digeſtion than any other meats, becauſe they are more ſlowly diſſolved in the ſtomach; and it may be admitted as a pretty general truth, that foods being leſs digeſtible does not depend ſo much on the firmneſs of their texture, as on their viſcid, mucilaginous or glutinous nature. As they contain more mucilaginous parts, and leſs animal ſalt, they have little flavour, and a very ſmall degree of alcaleſcency; and therefore do not act ſo gratefully on the nerves of the ſtomach, as thoſe which are more ſtimulating; and there are many perſons whoſe ſtomachs are oppreſſed by them.

As

As they contain a great proportion of nouriſhment, with little ſtimulus; they are proper for young perſons of good appetites and quick digeſtion.

Jellies have very improperly been deemed of eaſy digeſtion. My ingenious friend Dr. *Stack* told me, he had ſeen very alarming ſymptoms from too liberal a uſe of jellies.

Brawn. A conſiderable part of this food being inſipid and horny, it is not very ſoluble by the juices of the ſtomach.

Eggs are extremely nutritive, but difficult of digeſtion; the white more ſo than the yolk: the white reſembles the curd of milk, and that principle of the blood, called the coagulable lymph or ſerum, by which our bodies are ſuppoſed to be nouriſhed.

ORD. II. Gen. II. T. 1. *Scaly Fiſh*, No. 1 to 6.

§. 23. A very learned and ingenious phyſician* has aſſigned to fiſh a middle rank between animals and vegetables. Compared to ſome of the meats of old animals, I think the obſervation is juſt; but may not hold univerſally.

* Dr. *Falconer*, in his Treatiſe on the Influence of Climates; a work of great erudition, and which contains much information.

The

The ſix ſpecies mentioned here, ſeem to be more ſtimulating, and more digeſtible, than the younger meats.

Monſieur *Goſſe* found boiled perch very digeſtible; but he does not ſeem to have made many experiments with fiſh. *Cornaro* always found fiſh oppreſſive to his ſtomach. The ſcaly fiſh have been ſuppoſed to be more digeſtible than the others.

ORD. III. Gen. II. Table 1, B. *Tame Animals.*

§. 24. Theſe are more alcaleſcent and ſtimulating than the preceding genera; and being more grateful to the nerves of the ſtomach, are more digeſtible.

Sanctorius deemed mutton a more perſpirable food than any other; but our beef, which is more perfect than the Italian, is perhaps equally perſpirable. There is, however, ſomething in mutton ſo congenial to the nerves of the ſtomach, as rarely to cloy the appetite by repeated uſe.

ORD. III. Gen. III. Table 1. F. *Shell Fiſh.*

§. 25. Theſe have a conſiderable degree of alcaleſcency and ſtimulus. *Sanctorius*, and his commentator *Keil*, deemed the *oyſter* to be

be very little perſpirable, and therefore not very digeſtible; on the other hand it is by many thought to be very much ſo; and, ſome years ago, became a faſhionable article of food for invalids. There are ſeveral other ſhell-fiſh beſide thoſe in the liſt; but they are nearly ſimilar in their nature. The *muſcle* is often poiſonous, owing probably to its feeding on copper banks.

ORD. IV. Gen. I. *Fiſh.* Tab. 1. G. No. 17 to 24.

§. 26. The *Salmon*, *Eel*, and *Turtle*, are, in the common phraſe, very rich food; and therefore are conſiderably ſtimulating and alcaleſcent. There are four ſpecies of the turtle; but the green turtle is preferred. It is by ſome deemed very digeſtible; but its glutinous parts, which are deemed the moſt delicate, certainly are not ſo. The *Sturgeon* is placed very low in the ſcale of digeſtibility; but a gentleman who reſided long in Virginia, where I once ate of it freſh, tells me that it is there deemed very eaſy of digeſtion, is often dreſſed like veal, and can ſcarcely be diſtinguiſhed from it: But veal is certainly not ſo digeſtible as beef or mutton.

ORD. IV.

ORD. IV. Gen. I. *Wild Animals.* Tab. 1. A.

§. 27. There is a very conſiderable difference in the degree of ſtimulus in the different articles of this genus; but I was unwilling to enter into minute ſubdiviſions. I have placed *pork*, which is the meat of a tame animal, in this diviſion; and, in my own opinion, have placed it too low in the ſcale of digeſtibility; but I have done this in deference to common prejudice. It is not eaſy to account why the Egyptians and Jews did not eat this animal; indeed it was forbid by the legiſlator of the latter, probably as a groſs foul food that might exaſperate the leproſy, which prevailed among that people. It was highly eſteemed by the Greeks and Romans; and it ſeems to be a very wholeſome and digeſtible food.

The *Wild Hog* is, I know from experience, more alcaleſcent and digeſtible than the tame.

The *Duck* and *Gooſe*, though the moſt alcaleſcent and ſtimulating of the genus, are not the moſt digeſtible; owing probably to their very high flavour, to which our ſtomachs are become leſs habituated, as luxury has driven them from faſhionable tables, in favour

favour of younger animals of the ſame ſpecies. This predilection for inſipid premature meats, does not ſeem to be well founded; for nature certainly deſtined that they ſhould attain their full growth, before they are uſed as food; their juices in this ſtate being more nutritive and invigorating. The Solan gooſe is ſaid to be more digeſtible than the tame, but the only time I ever ate of it, I had no reaſon to boaſt of its digeſtibility.

With reſpect to the wild animals commonly called *Game*, the alcaleſcency of their fleſh depends either on their humours being highly animalized by exerciſe, as the *ſtag*, *hare*, and ſeveral ſpecies of *wild-fowl*; or the putreſcent nature of their food, as inſects and worms, on which ſeveral of the bird kind feed: hence they become ſooner putrid after they are killed, owing partly to their being killed in their blood.

I am ſurpriſed that epicures have not fallen on the expedient of killing ſheep partly in their blood; as the mutton might, by this means, be very little inferiour to *veniſon*, either in tenderneſs or flavour. But the butchers, not contented with bleeding them at their death, are, I am told, in the habit of

bleeding them ſome hours before they are ſlaughtered, from a vein or artery near the internal canthus of the eye.

The ſordid practice of inflating the cellular membrane, by a blow-pipe, is exceedingly diſguſting.

Meats are certainly rendered more digeſtible by having a ſlight tendency to be putrid; hence it is that we keep our meats for ſome days till they become tender.

The French do not reliſh animal food, unleſs it partake ſtrongly of the *fumette*; but as they eat a conſiderable proportion of bread; that, and their ſmall wines, correct the putreſcency.

A late eminent phyſician in London had ſuch a reliſh for putrid meats, as to offend the whole neighbourhood, whenever he could gratify himſelf with a *ſavoury* morſel of this kind.

The late Sir EDWARD BARRY prevailed on a man to live eight days on partridges without vegetables; but was obliged to deſiſt, from the appearance of ſtrong ſymptoms of putrefaction. The reſult of this experiment ſhews how neceſſary it is to mix vegetables with our animal foods.

If

If putrid foods are in any inſtance beneficial, it muſt be in thoſe caſes where the ſtomach is either loaded with inſipid phlegm, or diſpoſed to generate a very ſharp acid.

Some of the fiſhes might be placed under this head, rather than the preceding, as they ſeem to be very alcaleſcent, with a rancid tendency; though, from their glutinous quality, they are not eaſily ſubdued by the digeſtive powers: Monſr. *Goſſe* found that the ſolution of *ſkate* was very tardy in his ſtomach, and other perſons have found the *ſalmon* and *ſturgeon* to be equally ſo; yet Dr. *Cadogan* recommends ſkate, cod, and turbot, as articles of food for valetudinarians.

Old Cheeſe is placed here as being highly alcaleſcent; and therefore a good condiment after a dinner of inſipid meats.

I have placed *marrow*, *oil*, and *ſuet*, at the bottom of column A. Table I. not ſo much on account of their alcaleſcent nature, as the ſuppoſed difficulty of their ſolution in the ſtomach; and their impreſſion on its nerves, by which the ſenſation of hunger is ſoon blunted. It has been alledged, that vegetable oil, as oil of olives, is more digeſ-

tible than butter or animal oils; I doubt the fact. I ſhall take other opportunities of giving my opinion concerning the oily foods.

ORD. IV. Gen. 3. *Salted Meats.* Tab. 1. C.

§. 28. I have placed the ſalted meats and ſalted fiſh here; becauſe, though the ſalt, with which they are preſerved, leſſens their alcaleſcency; yet it increaſes their ſtimulus in the ſtomach, and creates heat, thirſt, and temporary fever. From my own experience, and that of others, I think they are more digeſtible, but leſs nutritive, than the unſalted meats; provided they have not acquired any degree of rancidity, which they are very apt to do, eſpecially bacon and fiſh.

Their digeſtibility ſeems to depend on two circumſtances: the animal mucus, which is the leaſt digeſtible, being partly diſſolved by the ſalt, and thereby rendered more miſcible with the digeſtive humours; and the grateful ſtimulus the ſea-ſalt imparts to the nerves of the ſtomach. Monſr. *Goſſe* found, on repeated trials, that lean ſalted beef was eaſy of digeſtion, but fried bacon and eggs became very much otherwiſe: the eggs became highly alcaline in the ſtomach.

They

They have been deemed unwholſome, and it is alledged they produce the ſea-ſcurvy; which may in ſome degree be the caſe, when, by long keeping, the putreſcency of the meat prevails over the preſerving power of the ſalt, and part of the ſalt becomes ammoniacal; but this can be no objection to the occaſional and moderate uſe of them, with freſh meats, and a due proportion of vegetables.

I ſhall cloſe theſe remarks on this claſs with a general obſervation. From the various degrees of ſtimulating quality with which animal foods are endued, and the occaſional remarks made §. 17, p. 82, &c. not only on their poſitive effects, but their relative, when compared with vegetables, it is manifeſt that there are no circumſtances under which a perſon in health ought to ſubſiſt ſolely on animal foods; becauſe, by exciting temporary fever after every meal, they urge the ſprings of life into conſtant, preternatural, and weakening exertions; and therefore that they ought to be qualified by a proportion of ſedative vegetables, according as the habit of body, or mode of life, may require; and that health is much more fre-

quently impaired by exceſs, than by defect, of animal food.

Thoſe medical travellers, who have viſited countries in which the inhabitants live almoſt entirely on animal foods, either fleſh or fiſh, have found that their predominant diſeaſes were itch, ſcurvy, leproſy, malignant ulcers, and fevers;—a proof how neceſſary a mixture of vegetable food is to the preſervation of health.

CHAP.

CHAP. VI.

VEGETABLE FOODS.

SEDATIVES VEGETABLE.

Tab. 1. H. I. K. L. M. N.

Vegetable Foods relatively ſedative—their component Principles—moſt of the nutritive Vegetables we uſe Natives of Aſia—Remarks on the Genera.

THE ſenſible qualities of vegetables afford ſome indications of their nutritious powers; thus, the fruits conſiſt of ſugar and acid united in various proportions, ſo as to form a kind of natural ſoap. In ſome of the vegetable plants and roots, the ſugar is much more predominant than the acid, and this in proportion to their advance toward the ſtate of maturity or ripeneſs; when the acid being more intimately mixed with the ſugar and oily part of the plant, the glutinous and ſtarchy parts are gradually thickened into a kind of farinaceous or mealy ſubſtance, which prevails more or leſs in all the

the alimentary vegetables, as they approach nearer to their ſtate of maturity. This is a ſhort ſketch of the compoſition of vegetables.

Though the *acorn* is ſaid to have been the original food of man before agriculture was practiſed; yet ſome have ſuppoſed that the *cheſnut*, not the acorn, was the firſt vegetable food of man. It is a curious circumſtance, that, from the beſt accounts tradition has handed down to us, *Europe* has been indebted to *Aſia* for all its alimentary vegetables, its grains, its fruits, and many of its eſculent vegetables and roots: the grains are certainly the chief vegetable nouriſhment from which man derives bread, the ſtaff of life.

All vegetables fit for nouriſhment ought to be mild, bland, and agreeable to the taſte; and though we admit ſome articles of an acrid nature, as *celery*, and ſome others, they are ſcarcely to be deemed foods. Vegetables, though many of them are very ſoluble in the ſtomach, are not ſo eaſily aſſimilated to our nature as animal food.

Several of the vegetables, as fruits, grains, and eſculents, ſometimes extricate air very rapidly in the ſtomach, by which it ſwells enormouſly; and ſome perſons have been ſuddenly

ſuddenly deſtroyed by it: hence it is that thoſe who have weak ſtomachs are often incommoded by vegetables.

Class II. §. 29. I have already obſerved, that all of this claſs are relatively ſedative, compared with animal foods; for though, by their bulk, they are ſo far ſtimulating, as to diſtend the cavities of the ſtomach and bowels, and thereby excite them to contraction; yet, with reſpect to their qualities, as aceſcent and cooling, they tend to mitigate the motions of the different organs.

Thus a vegetable diet will alleviate the ſymptoms of an inflammatory fever, by leſſening the alcaleſcent pungency of the blood, from the mixture of an aceſcent vegetable chyle; whereas all the ſymptoms would be increaſed by a diet of animal food, not only by adding, as it were, fuel to fire, but by throwing too large a quantity of rich nouriſhment into the circulation, and oppreſſing the vital ſecretory and excretory organs, which are already overcharged.

Though all the vegetables are not, ſtrictly ſpeaking, ſedative; and ſome of them are ſomewhat alcaleſcent, as cabbage, creſſes, &c. yet

yet they are ſo little ſtimulant as not to require a diſtinct conſideration; and when boiled, are diſpoſed to be aceſcent.

TABLE I. H. §. 30. Though the juices of all theſe fruits, and the pulp of many of them, are eaſily ſoluble in the ſtomach, and therefore very digeſtible; yet their ſeeds, cores, and rinds, or huſks, are very much otherwiſe; and dangerous, and even fatal effects, have been often produced by ſwallowing them in any conſiderable quantity.

The fruits, in their unripe ſtate, are what is called acerb, or harſhly ſour; owing to the predominance of the acid over the ſugar and oil; which in this ſtate are in a very ſmall proportion to the acid. Hence unripe fruits produce very diſagreeable feelings in the ſtomach and bowels; eſpecially when they are weak. *Cornaro* could not uſe fruits, without being diſturbed by them.

The *gooſeberry*, *currant*, *cherry*, and *plumb*, are ſometimes very flatulent, and create ſevere fits of the colic, hardneſs and ſwelling of the belly, or diarrhœa. All theſe fruits ſit more eaſily on the ſtomach, after having their air forced out by fire; either by roaſting, or made

made into pies or preſerves: vegetables in general contain much more air than animal foods. It has been a queſtion whether fruits ought to be eaten before or after dinner. With reſpect to perſons in health, it is not very material, any otherwiſe than that perſons who are young and full of blood may be ſo far benefited by a moderate uſe of fruit an hour or two before dinner, as it may abate a keen appetite for the principal meal. Perſons who are ſubject to little irregular fevers ought to eat fruit in the morning and evening; and I have known good effects from this practice. Many years ago, I knew a reſpectable old gentleman in one of our colonies, who told me that Dr. *Cheyne* recommended the uſe of fruit in this way on account of an eryſipelatous humour, which was ſometimes ſuſpected to have fallen on the ſtomach and bowels. He for many years ate at leaſt twelve oranges every day; and never had a return of his complaint. Such perſons as are ſubject to indigeſtion and acidity of the ſtomach, ought to eat their fruit rather after than before dinner.

Iced fruits have ſometimes been beneficial to hectic patients, from their cooling ſeda-

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tive qualities, but they are rather too cold for the ſtomachs of other invalids.

TABLE I. I. §. 31. The dried fruits are leſs aceſcent and flatulent, but more nutritive, than the green, but not ſo ſoluble in the ſtomach; theſe may be conſidered as in a great degree candied, or preſerved by their own ſugar, of which many of them contain a very large proportion: ſome of them are preſerved by an addition of ſugar.

Monsr. *G.* found fruits boiled with ſugar to be very eaſy of digeſtion. There is another ſpecies of preſerve which is not ſo; as the rinds of the bitter orange made into marmalade, and the candied citron and orange-peel; and this defect of digeſtibility proceeds from their bitter quality, which retards digeſtion. The practice, however, of eating marmalade at breakfaſt, formerly frequent in Scotland, might tend to qualify the enervating effects of tea; nor are eggs, for another reaſon, an improper addition to this maigre meal.

When fruits are preſerved with brandy, they are to be conſidered merely as dry drams; and are therefore placed under Claſs 6.

TABLE

TABLE I. K. §. 32. Theſe are commonly called the *Eſculent* plants and roots, being ſuch vegetables as are brought to our tables to add bulk to our dinner meal, together with bread; and to qualify our animal food, by leſſening its alcaleſcency and ſtimulus.

Some of them, as thoſe of the cabbage kind, are not ſo digeſtible as might have been expected from their alcaleſcency. There is ſomething in the effects of the *aſparagus* that ſeems to indicate a very active and even virulent nature; though it is very digeſtible, and ſits eaſily on the ſtomach, whilſt the plant is young. The *artichoke* is a very bland and good nouriſhment.

The *potatoe* partakes of the nature of the grains, and is fermentible into bread. It is a very wholeſome and good nutriment, and very ſeldom diſagrees with weak ſtomachs.

The *peaſe* and *beans*, when young, are to be deemed eſculents, as they are much leſs flatulent, and more digeſtible, than when dried.

It is evident, that man was intended by his frame, to uſe a mixture of vegetables; and we know that a want of freſh vegetables is one of the chief cauſes of ſcurvy in armies and fleets.

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There is another reaſon why vegetables ought to make a part of our meals. I remarked in Eſſay I. that as all the functions of our bodies are performed in conſequence of the action of their natural ſtimuli, one circumſtance eſſentially neceſſary is, that their bulk be ſuch as moderately to ſtretch or diſtend the cavities; otherwiſe they cannot re-act upon their contents. This is the caſe with the ſtomach and bowels, which if they are not moderately filled, digeſtion does not go on well. But it is neceſſary that a great part of our foods ſhould be ſolid, not only that we may be under a neceſſity of chewing them, to preſs out a conſiderable quantity of ſaliva, but that the preſſure of this ſolid food on the ſecretory veſſels of the ſtomach, may ſtimulate them to diſcharge a larger proportion of the gaſtric and other humours in the ſtomach and inteſtines.

It is ſuppoſed that a pound of bread, well chewed, carries with it into the ſtomach nearly the ſame quantity of ſaliva; and through the lacteals above two pounds more, by an addition of the other digeſtive humours. Hence the great advantage of compleat maſtication: liquid foods are not therefore

fore ſo much more digeſtible than ſolid foods, as is generally imagined; unleſs when the powers of the ſtomach are very weak.

With reſpect to the articles of this genus, it may in general be remarked, that though none of them are aceſcent, but moſt of them are rather ſlightly alcaleſcent, and the carrot and parſnip have a conſiderable proportion of ſugar, yet they have rather a tendency to become acid in the ſtomach; though, in healthy perſons, the gaſtric juice and bile correct that tendency, and perhaps the butter which is uſed with them. I have arranged them according to what I conceive to be their degrees of digeſtibility; the moſt digeſtible at the top of the column. Dr. *Stevens* found the parſnip to be totally undigeſted in the ſtomach and bowels of the man upon whom he made his experiments; whereas Monſ^r. *Goſſe* found his ſtomach digeſted them readily.

Table I. L. §. 31. Theſe grains, and the flour prepared from ſome of them, are leſs aceſcent than the former, and more ſo than the next; they however are much more glutinous and nutritive than either, and there-

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fore to render ſome of them more ſoluble in the ſtomach, they have their tenacity broken by fermentation. Their nutritive quality depends on a conſiderable proportion of ſugar blended with a latent acid, an oil, a ſtarch, and a mucilage; and it is the ſugar that chiefly produces the fermentation by which bread is made: the ſweet taſte is more predominant when the grains are green.

The part of vegetables which I call the ſtarch, has a ſtrong acid tendency; whereas the mucilage approaches nearer to an animal nature, and is putreſcent; but the ſtarch being predominant, the acid diſpoſition prevails. The grains, when reduced into fine flour, ſtill retaining the acid tendency, will even become ſour, if moiſtened with water, without the addition of fermenting leaven. This leaven is of two kinds; 1*ſt*. That which is obtained by a bit of ſour leaven, which ferments more ſlowly, and gives the dough and bread a ſour taſte; and this is the bread chiefly uſed on the continent of Europe. 2*dly*. The yeaſt which we uſe in this country, to which the hop in our beer gives a bitteriſh taſte; and hence foreigners, uſed to ſour leaven, complain of our bread being bitter.

There are ſeveral kinds of grain uſed in the form of bread in other countries, which even the parochial poor of this would reject with diſdain; as thoſe of barley, oatmeal, peaſe, and rye. It is not yet determined what ſpecies of bread is moſt digeſtible, though I think brown more ſo than fine bread.

To perſons whoſe digeſtion is good, the choice is not of great conſequence. The bread made from the fineſt wheaten flour is ſuſpected to have alum mixed with it; which, if it does not make it unwholſome, diſpoſes it to become ſtrongly acid in the ſtomach.

Monsr. *Goſſe* found that bread the ſecond day after it was baked, was much more eaſy of digeſtion than the new; and cruſt more than the crumb.

Salt renders bread more digeſtible; therefore he found the ſalted bread of Geneva preferable to that of Paris, which is made without ſalt. Bread made of rye and barley, he found to be not ſo digeſtible as that made of wheat flour.

Unfermented bread, as biſcuit, &c. is not much uſed, excepting at ſea; it has not yet been determined whether it is more or leſs

digeſtible than the fermented; though I am inclined to think it is more ſo.

An abſurd opinion has been entertained that oatmeal is heating, and produces itch; but nothing can be farther from truth than the allegation. Oats are not ſo nouriſhing as wheat, but more digeſtible and ſedative.

Paſtry, puddings, and pies, prepared from different kinds of grain, are more or leſs nutritive, according to the proportion of butter, ſuet, eggs, and ſugar, they contain. Theſe additions ſeem to leſſen the glutinous quality of the flour, and render it more eaſy of digeſtion. Many of the ordinary puddings which come to our tables, are eaſy of digeſtion; and even our cakes and paſtry, if the butter be good, the quantity not too great, and the oven not over-heated, are not ſo indigeſtible as is commonly imagined. Paſtry became intolerably acid on M. *Goſſe*'s ſtomach.

Table I. N.

§. 32. All the *Nuts*, which are ſimilar in their nature to the grains, ſeem to be very difficult of digeſtion, as they oppreſs the ſtomach ſome hours after they are uſed. When made into puddings or emulſions, their tenacity is in ſome meaſure broken by ſugar.

§. 33. The *Salads* are rather to be conſidered as articles of luxury than of aliment. Monſ. *Goſſe* found that ſuch as were the moſt bitter, were the moſt digeſtible; that all of them were more digeſtible boiled than raw; and that vinegar retarded their digeſtion. *Lettuce* is ſuppoſed, by ſome, to diſpoſe to ſleep, and may therefore make an inoffenſive article of ſupper for ſome invalids. *Cucumbers* are very cold, and difficult of digeſtion. It is remarkable, that almoſt all nations have concurred in joining oil and vinegar to this kind of food; probably from experience of their checking its diſpoſition to ferment and become flatulent. The fungous vegetables, the *Truffle* and *Morell*, are articles of luxury, whoſe properties, as well as thoſe of the *Muſhroom*, ſeem to be conſiderably alcaleſcent.

I omitted to remark in its proper place, that a German chemiſt, Mr. *Scheele*, has diſcovered that the fruits ſeem to contain three kinds of acids; the apple acid; the acid of lemons, and the acid of ſugar or wood ſorrel. The acid of apples ſeems to be the moſt general of the acids among the fruits; and, what is ſingular, it is the chief acid of

milk, joined with a ſmaller proportion of acid which ſeems to belong peculiarly to the milk. He found blood and eggs contained two acids, that of apples and of ſugar. The air in animal ſubſtances ſeems to be chiefly inflammable, and different from that of vegetables.

Vegetable food is not ſo nouriſhing or invigorating as animal food; and, under a regimen of this kind, the vital powers and circulation are more languid, and the blood and ſecreted humours leſs alcaleſcent and ſtimulating; therefore ſuch perſons as from neceſſity live on vegetables alone, are ſubject to flatulent colics, have a pale bloated aſpect, and a diſpoſition to dropſy.

Class III. Liquid Foods

May be ſaid to be more than half digeſted, the nutritive parts being extracted from the groſſer by boiling.

Gen. 1. *Liquid Animal Foods.*

§. 34. Theſe are more or leſs alcaleſcent and ſtimulating, according to the animals from which they are prepared, and the degree of boiling they undergo. Beef and mutton

mutton tea, as they are quaintly called, and chicken water, are very light decoctions of the lean parts of the animals, and conſequently leſs ſtimulating. The ſtronger broths are more nutritive and alcaleſcent; but *Jellies*, which are the mucilaginous extract of certain parts of animals, eſpecially calves feet and hartſhorn, are leſs alcaleſcent, but not very digeſtible. All theſe liquid foods are diſpoſed to become aceſcent after ſtanding ſome hours in a warm place: this may poſſibly be owing to a matter reſembling vegetable ſtarch.

Gen. 2. *Vegetable Liquid Nouriſhment.*

§. 35. The materials from whence theſe are prepared are enumerated Table 1, L. Some of theſe ſlops are prepared from our own grains, as oatmeal-gruel, flour-pap, and panada; ſeveral of them are imported.

§. 36. The *Rice* is a very digeſtible food, but of little nouriſhment. The *Sago*, *Vermicelli*, and *Tapioca*, ſeem to be paſtes of the glutinous parts of mucilaginous vegetables; tapioca is ſaid to be the jelly of the caſſava. *Chocolate* is a paſte prepared from an oily

ſeed or nut; it is very nutritive, but not eaſy of digeſtion; and therefore *cocoa* is uſed as a ſubſtitute, but improperly; for it is only the huſky part of the chocolate nut, mixed with a little of the nut and ſome droſs and duſt; therefore very weak chocolate is equally digeſtible, and a more cleanly food.

§. 37. Of the foreign vegetables in uſe among us, *Tea* and *Coffee* are the moſt frequently employed; not ſo much as articles of food, as of luxury.

Dr. *Kæmpfer*, who reſided many years in the Eaſt, tells us, that tea has ſome qualities which render it injurious to the nerves, and which ſeem to be owing to a clammy acid juice, which is ſo corroſive in the green plant, as to excoriate the hands of thoſe who toaſt and roll it, though a part of it is diſcharged or corrected by drying.

It does not appear that there is more than one ſpecies of the tea-plant, the difference of the quality depending on the ſeaſon of picking the leaves; the fineſt in the ſpring, the ſecond about May, and the coarſeſt later in the ſummer. Of the fineſt, a ſort is appropriated ſolely to the uſe of the royal family

mily of Japan, and coſts 240 crowns per lb.; it is ground to powder, and mixed with warm water, and the whole drank together; the Tartars uſe a very coarſe ſort, to promote digeſtion after a meal of raw horſe-fleſh.

It is not likely that the green teas derive their colour from being dried on copper plates; it is certain, however, that many have their nerves affected by it, who drink bohea without inconvenience; and it is ſaid that in Japan the green produces diabetes and conſumption. A water diſtilled from green tea injected into the belly of a frog, and applied to the ſciatic nerves, produced, in both experiments, a palſy of its hind legs. A decoction of the bohea is ſaid to be aſtringent and antiſeptic, and an extract of it is ſometimes imported into Europe.

But, notwithſtanding theſe injurious effects of tea, it certainly promotes digeſtion after a full meal of animal food, and a liberal uſe of ſtrong drink; has good effects after extreme fatigue; and is a beneficial ſedative drink in the firſt ſtage of inflammatory fevers.

§. 38. *Coffee* is a native of Arabia, but is now cultivated in the Weſt-Indies, and a conſiderable

conſiderable quantity of the latter is imported into Turkey. Though its ſenſible qualities are apparently different from thoſe of tea, its effects upon the nervous ſyſtem are pretty ſimilar to, though not ſo injurious as, thoſe of tea: it manifeſtly counteracts the anodyne power of opium, and ſtudious perſons often uſe it to divert ſleep, when they wiſh to protract their ſtudies. Tea has frequently the ſame effect.

Coffee is better accommodated to thoſe who indulge in the luxury of the table, and the uſe of wine; but improper for thoſe who uſe a ſpare diet, and little or no fermented drink.

§. 39. Having finiſhed the remarks on the claſs of vegetable ſedatives, it appears that their effects may be conſidered as rather negative than poſitive; or, in other words, that when combined with animal foods, according to their proportion, or the degree of their ſedative quality, they leſſen their ſtimulus; or when uſed alone, as articles of diet, they diminiſh the energy of the nervous and circulating ſyſtems, and the ſtrength of the body.

From

From this account of their general effects, it is manifeſt, that different proportions of vegetable food ought to be adapted to particular habits of body, and modes of life; and though there are, probably, no circumſtances under which a perſon in health ought to ſubſiſt totally on vegetables; yet there are many under which a temporary uſe of them may be proper for the prevention or cure of diſeaſes. See §. 20, page 191; and §. 27, page 205.

Class IV. Stimulant Vegetables.

Pot-Herbs, their qualities and uſe—Condiments of different qualities—ſedative—ſtimulant.

Having conſidered the alimentary parts of our foods, we come now to condiments or ſauces, which are uſed to ſharpen the appetite, and promote digeſtion.

Table I. O.

§. 40. *Pot-herbs* are certainly to be deemed ſauces, rather than foods: all of them, except parſley, are ſtimulants in different degrees. The laſt of the column, as being the moſt ſtimulating, certainly promote digeſtion moſt,

for

for reaſons aſſigned before. Monſ. *Goſſe* found that all of this genus were more digeſtible boiled than raw.

Table 1. P. *Condiments.*

§. 41. Thoſe under this head are what are peculiarly called *Confections*, as preſerving animal and vegetable foods; and alſo pickles and ſpices.

The uſe of condiments ſeems to have been firſt ſuggeſted by a ſenſe of oppreſſion in the ſtomach when languid, and clogged by inſipid foods. If we except ſalt and ſugar, the condiments are certainly unneceſſary to perſons in health; and ſome nations uſe neither even of theſe.

I have already remarked, that every article which enters into our aliment, and is not eaſily changed by the powers of the conſtitution, approaches nearer to the nature of medicine than of food; and therefore ought to be uſed very ſparingly by perſons in health: Several of the condiments come under this deſcription.

Sugar enters into the compoſition of many articles of our vegetable aliment; and ſome chemiſts have alledged that they owe their nutritive

nutritive qualities chiefly to this; but the oily and mucilaginous parts are alſo nutritive. Refined ſugar is leſs diſpoſed to ferment and become ſour than the Muſcovado or brown ſugar; which makes the latter more fit for preſerving meat. This acid tendency diſpoſes it to reſiſt putrefaction; and therefore, ſince it has come into general uſe, putrid fevers have been leſs frequent in this kingdom.

Honey is a liquid ſugar, but much more diſpoſed to ferment.

Under this head we may bring all articles of confection made with ſugar, honey, or melaſſes; and all the fruits preſerved with ſugar. Some have deemed ſugar to be injurious to the teeth, from its ſaline and aceſcent quality; but the Africans, in our colonies, who eat the ſugar-cane very plentifully, do not ſeem to be more ſubject to tooth-ache than perſons in this climate; and as a proof of the wholeſomeneſs of ſugar, the planters know their negro ſervants are remarkably ſtronger and more healthy during the ſeaſon of making ſugar, than at any other ſeaſon of the year, owing to the profuſe uſe of the cane-juice.

Salt,

Salt, when uſed in a large proportion for the preſervation of meats, reſiſts their tendency to putrefaction for a time, but not entirely; but when uſed as a condiment at our tables, with freſh meats and vegetables, it gratefully ſtimulates the nerves of the ſtomach, promotes the ſolution and mixture of the glutinous and oily parts of our foods, and corrects aceſcency. That it is a wholeſome addition to vegetable food appears from black cattle, ſheep, and horſes, being very fond of it. It ought to be uſed ſparingly by young, florid, and hale people, as it heats and creates thirſt.

I have brought *Olives* under this order, as they are generally uſed as a condiment with us; though as a food in their native ſoil.

Vinegar is ſedative, and reſiſts putrefaction; but being the product of an imperfect fermentation, it is not ſo powerful in this reſpect as ſome of the vegetable acids.

Some young women have uſed it to prevent corpulency, to the irreparable loſs of health. It ſeems to act in theſe caſes by weakening the powers of the ſtomach, and retarding the digeſtion.

The

The French uſe vinegar more liberally than we do, and it is a very proper ſauce for their meats, which they generally eat in a putreſcent ſtate. Their vinegar is much more genuine than ours, which is generally adulterated with oil of vitriol.

Lemon-juice is a more powerful ſedative, and reſiſter of putrefaction, than vinegar.

Pickles are preſerved either with ſalt, as the olive, or with vinegar, as the cucumber, walnut, &c. Thoſe prepared with vinegar, if uſed moderately, are not an improper addition to animal foods, though they retard the ſolution of the food in a ſmall degree; the more alcaleſcent foods counteract the ſedative and acid quality of the vinegar.

Muſtard and *Horſe-radiſh* are leſs ſtimulating than the ſpices, and therefore more ſafe condiments in temperate and cold climates.

Spices are all the products of hot climates; and therefore more ſuitable condiments in thoſe countries than in this; a fitter addition to vegetable than animal foods; and more proper for languid and debilitated conſtitutions, than thoſe of a hale, ſanguine habit.

They are more or leſs heating and ſtimulating, according to the quantity and quality of

of their eſſential oil. Monſr. *Goſſe* found that pepper did not retard the digeſtion of his foods ſo much as vinegar. *Cornaro* found that his ſtomach was very much ſtrengthened by cinnamon; a proof that the condiments are not ſo injurious to invalids as Dr. *Cadogan* alledges.

Cayenne pepper ought not to be ranked with the ſpices, as its oil is not aromatic. The ſtimulating and heating quality of this and others of the capſicum kind, though apparently ſtronger than that of the ſpices, is leſs permanent, and therefore more ſafe. When parrots are ſick and drooping, and do not caſt their old feathers properly, the green pepper, of which the *chian* is made, never fails to reſtore them; and theſe pods, ſwallowed in the quantity of from three to thirty in a morning, have been of great uſe in that relaxed ſtate of the body which is often connected with paralytic and dropſical tendency, generally known by the name of cachexy; almoſt always attended with weakneſs of the digeſtive organs.

CHAP.

CHAP. VI.

CLASS VII.——DRINKS.

Drinks, their uſe—Sedative Drinks—Water of different kinds—Teſts of its Purity—Watery Drinks—Stimulating Drinks of various kinds, fermented, ardent—Liqueurs, the uſe of them why dangerous.

PROP. V. OUR DRINKS ARE EITHER SEDATIVE OR STIMULATING, THE LATTER CHIEFLY FROM FERMENTATION, PRODUCED BY THE SUGAR CONTAINED IN VARIOUS FRUITS, SEEDS, AND OTHER PARTS OF VEGETABLES.

THE reader, before he proceeds to the peruſal of this chapter, is requeſted to re-peruſe §. 20, p. 191; §. 27, p. 205; and §. 39, p. 224; on the ſtimulating and ſedative effects of our aliments.

I have inſerted the claſs of drinks in this chapter, as it could not properly have a place in the other.

The

The natural and proper purpoſe of drink is to quench thirſt, and dilute our foods in the ſtomach: but this purpoſe has been perverted by luxury; inſomuch that we anticipate the appetite of thirſt; and ſwallow ſuch drinks as have a tendency rather to increaſe than allay it.

There are ſome perſons who never drink at meals, and rarely on any other occaſion: on the whole, however, we drink rather too much, and thereby weaken the activity of our digeſtive humours.

Ord. I. Sedative Drinks.

§. 42. Water is the only ſedative drink we uſe; and is the baſis of many of the fermented drinks. Some experiments ſeem to ſhew that water is compoſed of inflammable and dephlogiſticated airs Dr. *Falconer** thinks that the briſk taſte of ſpring water proceeds from fixible aïr; he thinks, and I believe juſtly, that leaden pipes and reſervoirs are to be ſuſpected, as part of the lead

* Eſſay on the Waters uſed in Diet at Bath: a work worthy of the peruſal, not only of medical men, but of others who ſet a juſt value on the means of preſerving health, ſo far as regards the choice of water.

may

may be diſſolved. It is of various degrees of purity, and it may be proper to conſider the different kinds: and as it is the baſis of all our drinks, and many articles of food are prepared with it, a very ſmall impregnation with improper matter may render it very injurious.

The relative purity of water is more accurately aſcertained by chemical teſts, than in any other way; but for theſe I muſt refer to Dr. *Falconer* and other authors on this ſubject; and ſhall take notice of the common teſts only. Water is moſt pure, which is limpid, without colour or ſmell, breaks ſoap readily, boils peaſe and other pulſe ſoon and tender, and does not give meat boiled in it a red hue; and moreover if it freezes readily, and does not incruſt the bottom or ſides of veſſels in which it is boiled. Our water at Bath is, from Dr. *Falconer*'s experiments, found to be purer than the pump waters in London. That in the Circus here, ſeems to be the beſt. Animals that drink impure water are apt to have enlargements of the liver and ſpleen.

Gen. 1. *Ice Water* is perhaps the pureſt of any, as the groſſer mineral particles, which

all waters contain in a greater or leſſer degree, are probably excluded; as being leſs ſuſceptible of congelation. For the diſcovery of the wholeſomeneſs of the ice of ſea-water, as a drink, we are indebted to the celebrated circumnavigator Captain *Cooke*.

It has been alledged that the *goiter* of Swiſſerland, or ſwelling of the throat, is owing to the uſe of ſnow water; but this fact is not well aſcertained; as this diſeaſe occurs elſewhere, as well as in the neighbourhood of the Alps. It is more probably owing to ſome mineral matter with which the water is impregnated.

Gen. 2. *Rain Water* is perhaps the next in purity; as having undergone a kind of natural diſtillation.

Gen. 3. *River Water* is a compound of ſpring and rain water, blended with various impurities, eſpecially near great cities: if permitted to ſettle, and depoſite its groſs contents, and eſpecially if paſſed through a filtering ſtone, it is the next in degree of purity. It is ſeldom uſed either for drinking or in the kitchen; but ſome think it preferable for brewing.

Gen.

Gen. 4. *Spring Water* is always more or leſs impregnated with mineral ſubſtances; which, as they cannot be aſſimilated by our digeſtive organs, are ſo far noxious. It is better when it paſſes over a chalk than clay, or is found near coal-mines, or the ſea.

The pump water in London, and I believe, in general, through the kingdom, contains limeſtone, and the three mineral acids of vitriol, nitre, and ſea ſalt. The ſpirit of vitriol changes the limeſtone into a ſelenites, which is inconquerable by the powers of our conſtitution: the other acids diſſolve a part of the limeſtone, and mix it ſo intimately with the water, that it cannot be ſeparated from the water by boiling; and what remains of the limeſtone, which the acids do not act upon, falls to the bottom, and forms a cruſt on the veſſels in which it is boiled. Theſe mixtures in pump water have been juſtly ſuſpected of producing various diſeaſes, eſpecially in invalids and children; and therefore a change of place may often be of as much uſe to weak perſons, from the change of water, as of air. Boiling ſpring water makes very little, if any, change for the better; though about ten grains of ſalt of tartar to

a pint, would correct it exceedingly; but it would render it unpalatable.

Gen. 5. *Stagnant Waters*, as thoſe of lakes, ponds, &c. are perhaps the moſt unwholeſome of any, as they are apt to become putrid, and contain animalcules and their eggs; and therefore, if uſed from neceſſity, they ought to be firſt boiled, and then paſſed through a filtering ſtone: Rain water preſerved in reſervoirs ought to be corrected in the ſame way; for they are liable to the ſame objections as other ſtagnant waters.

Gen. 6. *Diſtilled Water*. I have been informed, that a very eminent and truly reſpectable phyſician in London uſes diſtilled water for his common drink. It acquires a diſagreeable flavour from the ſtill, which it does not ſoon loſe: It would however be right for invalids to uſe it in all caſes where the common water near them is ſuſpected of being impure. Briſtol Hotwell water, now bottled and tranſported to every part of the kingdom, would probably be a good ſubſtitute.

As water drinking, like many other good old cuſtoms, is now very much out of faſhion, the opinion of the celebrated Dr. *Hoffman* on

on this ſubject may induce ſome of my readers to adopt the practice.

" Pure water," ſays the Doctor, " is the " beſt drink for perſons of all ages and " temperaments. By its fluidity and mild- " neſs it promotes a free and equable circu- " lation of the blood and humours through " all the veſſels of the body, upon which the " due performance of every animal function " depends; and hence water-drinkers are not " only the moſt active and nimble, but alſo " the moſt cheerful and ſprightly of all " people. In ſanguine complexions, water, " by diluting the blood, renders the circula- " tion eaſy and uniform. In the choleric, " the coolneſs of the water reſtrains the " quick motion and intenſe heat of the hu- " mours. It attenuates the glutinous viſci- " dity of the juices of the phlegmatic, and " the groſs earthineſs which prevails in me- " lancholic temperaments. And as to dif- " ferent ages, water is good for children, " to make their tenacious, milky diet, thin " and eaſy to digeſt; for youth and middle- " aged people, to ſweeten and diſſolve any " ſcorbutic acrimony, or ſharpneſs that may " be in the humours, by which means pains

" and obſtructions are prevented; and for " old people, to moiſten and mollify their " rigid fibres, and to promote a leſs difficult " circulation through their hard and ſhri- " velled veſſels. In ſhort," ſays he, " of all " the productions of nature or art, water " comes the neareſt to that univerſal remedy " or panacea, ſo much ſearched after by " mankind, but never diſcovered."

There are various ſedative drinks of which water conſtitutes the principal part, as water-gruel, rice-gruel, barley-water, vinegar mixed with water, (which was the drink of the Roman ſoldiers) water impregnated with the juice of lemons or limes, or with the juices of fruits, or with ſugar or honey; and to theſe we may add the different kinds of milk converted into whey by rennet; butter-milk, &c. ſome of which have more or leſs of nutritive parts in them; whilſt others are rather to be deemed medicinal.

Ord. II. *Stimulating Fermented Drinks.*

§. 43. To render this ſubject more intelligible to thoſe who are not converſant with the principles of chemiſtry, a few preliminary obſervations may be neceſſary.

1*ſt*. Beſide

1*ſt*. Beſide the ſugar or honey prepared by the bee, or contained in the ſugar-cane, there is, as I have already remarked, in many vegetables, eſpecially the grains, fruits, and ſeveral roots, a ſweet or ſaccharine juice.

2*dly*. Fermentation is a chemical proceſs of a very curious nature, by which the principles of bodies are changed, blended, and combined, ſo as to acquire a form and nature very different from that which they had before fermentation. It has not, perhaps, been accurately determined how many kinds of fermentation there are in nature. Three are well known; the vinous, the acetous, and the putrefactive: concerning the latter, ſome hints have been given, Eſſay I. ſo far as reſpects the changes it produces in animal bodies, but it certainly takes place in vegetables alſo.

3*dly*. That fermentation by which vegetables acquire a ſtimulating and intoxicating nature, is called by chemiſts the *vinous*, derived from the Latin term for wine.

4*thly*. Every ſubſtance which contains ſugar, is ſuſceptible of vinous fermentation; hence the great variety of fermented liquors.

5*thly*. In

5*thly*. In every fermented liquor there is ſugar, water, ardent ſpirit, or alcohol, or what is called brandy, and an acid or vinegar.

6*thly*. By fermentation a very extraordinary change is made on the ſugar, which is a mild, nutritive, ſedative, eſſential, vegetable ſalt; and is thereby converted into a pungent, ſtimulant, heating, and intoxicating liquor; for this is the property of all fermented drinks of every denomination.

7*thly*. The difference in the colour, ſmell, taſte, and conſiſtence of fermented drinks, ſeems to depend on the quantity of the eſſential ſalt or ſugar, which in all is nearly the ſame; the nature of the eſſential oil, which is probably different in each; and the degree of fermentation. Wines often derive their colour from art.

8*thly*. When ſweetneſs predominates in theſe liquors, as in ale and ſweet wines, it depends either on the quantity of the ſugar having been ſo great in proportion to the watery part, as that the whole could not be aſſimilated into a vinous nature by fermentation; but this is rarely the caſe, for the brewers, whether of beer or wine, are ſufficiently œconomical in that reſpect; ſweetneſs, therefore,

therefore, more frequently proceeds from the fermentation not having been ſufficiently briſk, or having ſtopped too ſoon; ſo that a conſiderable portion remains unchanged.

9thly. The ſtrength of theſe liquors depends partly on the quantity of the ſugar being conſiderable, and its being chiefly converted into the vinous ſtate, ſo that a conſiderable quantity of ardent ſpirit or brandy is produced; for on this chiefly depends its intoxicating quality.

1o*thly*. There is an acid in all fermented liquors, even the ſtrongeſt and moſt perfect. This may proceed from there being a conſiderable quantity in the vegetable, as in ſome grapes and other fruits, ſo that the whole cannot be ſubdued by the ſugar, which in theſe fruits is generally in too ſmall a proportion; hence it is that in preparing what are called made wines, it is neceſſary to add a conſiderable quantity of ſugar to the fruits. But acidity happens more frequently from the quantity of ſugar being either too ſmall, or the fermentation not being continued long enough to generate a ſufficient quantity of ardent ſpirit; ſo that the ſugar, being in its nature aceſcent, proceeds to the next ſtage of fermentation,

fermentation, called the *acetous* or vinegar ferment, by which the ardent ſpirit is gradually leſſened or ſubdued. Hence it is that ſweet wines are very apt to become ſour; and the wines of hot climates have more or leſs brandy added to them, otherwiſe they would not keep; or in other words, they would paſs from the vinous to the acetous fermentation, or become vinegar: ſo that it is not ſo much the quantity of the ſugar, as the compleatneſs of the vinous fermentations, which prevents the converſion of wine, ale, cyder, &c. into vinegar.

11*thly*. There is an auſterity in ſome fermented drinks, owing either to the nature of the fruits, or their being ſubjected to fermentation before they are ſufficiently ripe; ſo as that the acid may be blended with the ſugar, mucilage, and oil.

12*thly*. In fermentation there is a very conſiderable quantity of air thrown off. We know that this air forms a conſtituent principle of the vegetable, and remains blended with the other principles in a fixed or quieſcent ſtate; ſo that it is not, as was formerly ſuppoſed, a generated principle, but merely extricated, or ſet looſe, by the act of fermentation.

Some have ſuppoſed that this air is what is called the fixible, produced by a combination of the inflammable air of the watery principle with the vegetable of the ſugar. Fermented liquors, therefore, are ſaid to be briſk, when a conſiderable quantity of this air is extricated; and flat, when, in conſequence of imperfect fermentation, very little of it has been extricated, or has made its eſcape: to prevent which, fermented liquors ought to be kept in veſſels cloſe ſtopped. This air renders fermented liquors more grateful to the palate and nerves of the ſtomach; but does not, I believe, add ſo much to its intoxicating quality as has been ſuppoſed.

Having premiſed ſuch remarks as relate to fermented liquors in general, I proceed to thoſe that are applicable to particular kinds.

Fermented liquors are of great antiquity; and though *Noah* is ſaid to have invented the method of making wine, yet it is probable that the Antideluvians uſed ſome kind of fermented liquors before his time. The variety of fermented drinks is very great; *Pliny* ſays they amounted to 195 in his time.

Few, even of the uncivilized nations, are deſtitute of ſome kinds of fermented liquors.

Gen. 1.

Gen. 1. *Beers and Ales, or Barley Wine.*

§. 44. Malt, or fermented barley, produces theſe liquors; and as they contain a very conſiderable portion of nutritive particles, eſpecially new ale, tiplers may be ſaid, with *Boniface*, to eat as well as drink their ale.

Fermented liquors of this kind were invented, it is ſaid, by the *Egyptians* before wine; and from that country they were probably introduced into Greece, by the emigrants from Egypt.

Beer is called by *Ariſtotle* and *Xenophon* barley-wine. *Ale* had different names; and among others, one which ſignified the ſtrength of corn. It was the common drink of the lower people, even in wine countries. Though theſe liquors are generally made from barley, yet they may be prepared alſo from wheat, rye, oats, rice, or maize malted; though malting is not indiſpenſibly neceſſary.

In proportion as the fermentation is carried on, more of the nutritive particles are converted into the ſpirituous, they become by age leſs ſweet, and more intoxicating; as is the caſe with *ſtrong beers* of a conſiderable age.

Small

Small beer, as containing a leſs proportion of ſugar, is conſequently leſs heating and ſtimulating. In opulent families it is uſual to drink ſtale and hard ſmall beer, which ſometimes produces dangerous colics; a near and dear relation of mine was deſtroyed by it.

Porter is a peculiar kind of beer, the mode of preparing which is known to few; and though it has been inſinuated that ſome very extraordinary and exceptionable ingredients enter into its compoſition; yet it does not ſeem to be leſs wholeſome than the other beers.

Hops ſeem to be a neceſſary addition for the preſervation of malt liquors; if, as the very ingenious Dr. *Percival* has ſhewn by experiment, that acids and bitters neutralize each other; though this fact has been diſputed.

Gen. 2. *Honey Wines.*

§. 45. *Mead* is made from honey and water fermented, and in quality holds a middle place between ale and the ſweet wines. *Metheglin* differs little from mead.

Gen. 3.

Gen. 3. *Cyder and Perry.*

§. 46. Theſe may be termed apple and pear wines, and are really made wines; they are leſs alimentary, but more aceſcent, than the beers, and therefore leſs ſtimulating. They ſeem to have been invented later than beer or wine. They are ſuppoſed to be ſometimes adulterated with turnip or carrot juice, but the adulteration is not injurious as to the quality.

Gen. 4. *Made Wines.*

§. 47. It was the faſhion among phyſicians formerly, to reprobate our made wines as unwholſeome, but very unjuſtly; for if they are well fermented, and kept to a proper age, they are preferable to the foreign wines, as being free from adulteration, when made in private families.

Gen. 5. *Foreign Wines.*

§. 48. The variety of wines is very great, not ſo much owing, perhaps, to the diverſity of the fruit, as to the various mixture of one wine with another, and of the juices of other fruits; as cyder, the juice of turnips, ſloes, carrots, &c. Theſe mixtures, if well made, render

render the wines more palatable, without being leſs wholeſome. It is however ſuſpected, that the practice of mixing ſugar of lead with wines to deſtroy their aceſcency, is frequent, and muſt be very pernicious: it has been alledged that arſenick has been uſed as a refiner.

Although, as I remarked before, a certain proportion of ardent ſpirit is generated by fermentation, and gives the intoxicating quality to all fermented liquors; yet in many wines the proportion is ſo ſmall, that they cannot be kept for any time without a farther addition, and that is generally made by brandy diſtilled from wine. But there is reaſon to believe, that much of the low-priced wines uſed in this kingdom are not only almoſt entirely deſtitute of the juice of the grape, but, what is of worſe conſequence, have a large proportion of new corn ſpirit mixed with them.

Wines are of various kinds, ſweet and auſtere, ſtrong and weak. Theſe different qualities depend partly on the quantity of ſugar they contain, the degree of fermentation, the nature of their eſſential oils, different colouring ingredients, or the huſks, and

and various mixtures of other fermented liquors, eſpecially cyder and brandy.

The wines of the Northern countries, as the Moſelle, Rheniſh, Claret, Burgundy, Champaign, &c. are more acid and briſk, and have therefore leſs ſweetneſs, than thoſe of the Southern countries; and yet it is alledged that the latter are more adulterated with brandy than the former, before they are exported, to prevent their becoming ſour in conſequence of their imperfect fermentation.

Old wines and other fermented liquors are preferred by connoiſſeurs; but though they may be deemed more palatable, they are not certainly more wholeſome, if kept beyond the time of the fermentation being compleatly finiſhed. *Cornaro* found old wine very diſagreeable to his ſtomach, and new wine very grateful. It is ſuppoſed that animal foods, on account of their putreſcent tendency, require fermented drinks to reſiſt that tendency; but I have known ſeveral perſons who ate liberally of animal food, and yet drank nothing but water, and without inconvenience. Water is certainly the beſt drink under a vegetable diet.

ORD. 3. *Ardent Spirits.*

§. 49. All the ſpirituous liquors come under this denomination.

Gen. 1. *Rum.*

Gen. 2. *Brandy.*

Gen. 3. *Arrack.*

Gen. 4. *Liqueurs and Cordials.*

It is a curious circumſtance, that though rum, brandy, arrack, &c. are the products of *vinous* fermentation, yet they check it very powerfully.

It has been a queſtion whether rum or brandy is moſt wholſome, ſome preferring the former, ſome the latter; and each appealing to experience, and even experiments; but the diſpute is futile, for the difference cannot be eſſential, provided the diſtillation has been properly conducted, and the liquors genuine, and of a proper age.

Arrack is well known to be prepared in Aſia. It cannot, in its properties, be eſſentially different from rum or brandy. Theſe liquors, as well as foreign wines, are all more or leſs adulterated, unleſs purchaſed immediately from the importer.

Punch, which is a ſpecies of wine, is the ſafeſt manner of diluting ardent ſpirits, both

the acid and ſugar counteracting the ſtimulus of the ſpirit, and is therefore a ſafer drink than grog or toddy.

With reſpect to the cloſet cordials, the Lady *Bountifuls* of the laſt age prepared many of theſe, on the ſuppoſition of their being poſſeſſed of ſovereign medical powers; and therefore indulged in the occaſional uſe of them as ſurfeit waters; though in truth not better, or more medicinal, than plain brandy; and perhaps more ſtimulating and injurious, on account of the ſpices diſtilled with them.

The *Liqueurs* are more uſed on the Continent than in Great-Britain, and are more inſidiouſly dangerous, as they are very palatable. Many perſons of worthy and reſpectable characters have been inſenſibly and inconſciouſly led into the fatal habit of tippling, by a frequent uſe of cloſet cordials and liqueurs.

Having finiſhed my general remarks on the contents of the tables, I ſhall have occaſion to take notice of ſome of the articles under the following propoſitions.

CHAP.

CHAP. VII.

DIETETIC REGIMEN FOR THE PRESERVATION OF HEALTH.

Preventive Regimen—a certain Latitude allowable; Quantity; Quality—Breakfaſt—Dinner—Supper.

PROP. VI. THE QUANTITY AND QUALITY OF FOODS USED BY PERSONS IN HEALTH OUGHT TO BE SUCH AS MAY BE SUFFICIENT TO SUPPLY THE DAILY WASTE OF OUR SOLIDS AND FLUIDS, WITHOUT DISTURBING OR IMPAIRING THE FUNCTIONS OF THE BODY, NATURAL, VITAL, OR ANIMAL.

§. 50. THIS Propoſition relates only to dietetic regimen accommodated to the preſervation of health, and containing rules ſuited to every kind of health. See §. 20, p. 191; §. 27, p. 205; and §. 39, p. 224; which will render this chapter more intelligible.

I do not wiſh it ſhould be underſtood, that we ought to be anxiouſly inquiſitive about the quality or quantity of every morſel we are about to ſwallow: this painful ſolicitude is totally incompatible with the enjoyment or duties of life: there is a certain mean to be regulated by our feelings.

I have (in Eſſay I.) explained the neceſſity for our uſing frequent ſupplies of food; and it may reaſonably be ſuppoſed, that the ſupply ought to be in proportion to the expence. Nature has regulated this by the appetite of hunger; but we rarely attend to, or obey, her inſtinctive dictates.

We ought carefully to chew our food, otherwiſe we ſhall impoſe much unneceſſary labour on the ſtomach, and retard digeſtion. Indications for regimen of diet, &c. in health, are proper, though not quite ſo neceſſary as in diſeaſe; and they can only be formed by analogical reaſoning on the relation between the nature of the human body and its functions, the waſte of its ſolids and fluids by the exerciſe of thoſe functions, and the means of compenſating for that waſte. With reſpect to diet, the indication is to regulate the quantity ſo as that the waſte ſhall be

be fully ſupplied without exceſs; and the quality ſuch as that it ſhall not be oppreſſive to the organs which prepare it. Hence the utility of phyſiological knowledge for the rational regulation of regimen.

§. 51. With reſpect to *quantity*, it is evident that this muſt be regulated by our feelings. A healthy man cannot be ſaid to exceed in the quantity of his meal, if he finiſhes it with a reliſh for more; if immediately after dinner, he can read, write, or follow any other employment that does not require ſtrong exerciſe or violent exertions; which to perſons in eaſy circumſtances will rarely be neceſſary, and ought in general to be avoided, as it diſturbs digeſtion; though daily practiſed, from neceſſity, by the labouring poor.

If, on the other hand, a perſon is liſtleſs, drowſy, with a ſenſe of load and oppreſſion at the pit of the ſtomach; if his ſleep during the night is diſturbed, and he is oppreſſed by night-mare, and diſagreeable dreams; and he awakes in the morning without his uſual alacrity, or with head-ache and a diſagreeable taſte in the mouth; it is probable that he has exceeded in the quantity of his meals the

preceding day, and ought to be more abſtemious, until thoſe ſymptoms wear off, and a return of appetite ſhews that the natural, vital, and animal functions are relieved from the oppreſſive load that has been laid upon them by occaſional intemperance.

Gluttony* is ſo ſordid and ungentlemanly a vice, that it would be an affront to ſuppoſe that perſons of poliſhed manners could be capable of it; and yet I ſuſpect that there are few perſons in health, who do not more or leſs exceed at dinner, for reaſons I ſhall aſſign hereafter.

* This term is only relative, for what would be exceſs in one perſon, would be moderation in another. The Emperor *Maximinius* and *Proculus*, who were men of gigantic ſtrength and ſtature, ate twenty pounds of food at a meal; and I knew a man of large ſtature and great ſtrength, who required thrice the ordinary quantity of food for his ſubſiſtence. Much in this reſpect depends on habit; it is however certain that we can ſubſiſt on a very ſmall quantity even of vegetable food.

The celebrated Defender of Gibraltar, during the laſt ſiege, lived upon four ounces of rice a day, for eight days together; this gentleman, however, uſes vegetables and water ſolely for his common food. We have well-atteſted accounts of perſons who have ſubſiſted with very little, if any food, for weeks, months, and indeed years; ſome from neceſſity, others from whim, and ſeveral under diſeaſes. Theſe latter were generally either deeply melancholic, lethargic, or in a ſtate of idiotiſm, and the ſenſations and faculties of the organs much impaired, or totally loſt.

It is worthy of remark, that infants and old people are leaſt able to bear long faſting; and therefore they ought to be frequently fed with liquid rather than ſolid food.

We ought always to deſiſt from eating before the ſenſe of fulneſs becomes oppreſſive; for the rarefaction of the air, as ſoon as the food begins to diſſolve, will increaſe the fulneſs of the ſtomach, and conſequently the uneaſineſs. If the ſtomach be too full, digeſtion is not only ſtopped, but a kind of palſy of the ſtomach is produced.

§. 52. *Quality of our Foods.* Perſons frequently enquire of phyſicians, whether this or that kind of food is or is not wholeſome. The only anſwer that ought to be made to this queſtion is, that of the articles of food in common uſe none can be deemed abſolutely unwholeſome; though, from a peculiar ſtate of the nerves of the ſtomach, certain foods agree better than others, and therefore every perſon, whoſe ſtomach has been repeatedly diſtreſſed by particular foods, ought certainly to avoid them.

Cornaro, whoſe experience is of great weight, remarks, that whatever be the quality of foods, there can be no objection, unleſs they diſagree, but that due regard ought to be paid to quantity, as the errors in this reſpect are very injurious; he having found

exceſs

exceſs to be the bane of health; and that invalids ought in many caſes to eat juſt ſo much as to keep ſoul and body together, and to eat frequently. "Were the pleaſure of "the palate laſting, (ſays he) it would be ſome "excuſe, but it is ſo momentary, that there is "ſcarce any diſtinguiſhing between the be-"ginning and the ending of it; whereas the "diſeaſes it produces are very durable."

It is a well known fact that, from a change of conſtitution, what agrees at one time of life, diſagrees at another, and the reverſe.

The only general rule with reſpect to quality is, that the quantity of our vegetable food ought to exceed that of the animal; and though we may gratify ourſelves by a change of food; yet a variety of mixtures ſhould be avoided, and our foods dreſſed in the ſimpleſt manner.

§. 53. *Breakfaſt.* With reſpect to the quality of our different meals, we ſeem to depart more from nature, and the cuſtom of our hardy anceſtors, with regard to breakfaſt, than any other meal.

The contraſt is in truth ridiculous. A maid of honour, in the court of Queen *Elizabeth*,

Elizabeth, breakfaſted upon beef, and drank ale after it; whilſt the ſportſman, the mechanic, and even the day-labourer, now breakfaſt on tea.

Modern luxury having ranſacked every quarter of the globe for its gratification; the uſe of tea is now become very general, even among the lower ranks in this kingdom.

As an article of breakfaſt, it is certainly improper, eſpecially for the poor, whoſe diet is chiefly vegetable; and the prevalency of nervous diſeaſes and palſies, among the middling and lower ranks, may be attributed partly to this cauſe.

To perſons of fortune, who indulge in a plentiful uſe of animal food, high ſauces, and rich wines, the uſe of coffee or tea after dinner may qualify the ſtimulating effects of the foods and drinks; but it were to be wiſhed that *even they* would avoid tea as a breakfaſt, or qualify it by a large portion of cream and ſugar.

The ſubjects of the Britiſh dominions are ſingular in their fondneſs for tea; at leaſt no other European nation uſes it to the exceſs we do. Happy would it have been for *Europeans*, if this enervating plant had never been imported

imported from Aſia. The Chineſe uſe very little tea themſelves.

But if perſons of rank and fortune are unwilling to give up their habits of life, they ought, at leaſt, to diſcourage the uſe of tea among their dependants; as much more wholeſome and nouriſhing food may be ſubſtituted at much leſs expence, both of money and time.

Breakfaſt may be ſaid to be the moſt natural of our meals, and that for which a temperate perſon ought to have the greateſt reliſh; becauſe, as many hours have intervened from the laſt meal, and as ſleep and perſpiration are favourable to digeſtion, if that has gone on properly, we ought to have a keen appetite for breakfaſt; otherwiſe we may be aſſured that ſome error has been committed in the quantity or quality of our preceding meals.

With reſpect to ſubſtitutes to tea for breakfaſt, milk and water, coffee, or weak chocolate, will be preferable. Thoſe who will moſt probably read this eſſay, being perſons of rank or fortune, will not, from their mode of life, be inclined to eat cheeſe, or cold meat; which, with ſoft ale, will be much preferable to tea for the laborious.

§. 54. *Dinner.* Moderate exerciſe before breakfaſt will whet the appetite, and we ſhould not allow a long ſpace to intervene between that and dinner; not only becauſe long faſting is injurious, but as we may be induced to eat more at this principal meal than can be properly digeſted.

Variety of diſhes is, however, the chief incentive to exceſs in quantity; and as people of fortune are generally *epicures* in ſome degree, they can rarely reſiſt the temptation of taſting moſt of the diſhes at table; ſuch, eſpecially, as are rendered palatable by high ſauces, and thereby inſenſibly exceed a due mean.

Soups or broths ought frequently to make a part of the dinner meal; as they prevent exceſs in the uſe of ſolid animal food.

To avoid this temptation, thoſe who have a due ſenſe of the importance of health will be contented with one diſh plainly dreſſed, and "throw their fevers and gouts to the "poor."

§. 55. *Supper.* It has been a queſtion much agitated, whether ſupper is, or is not, a wholeſome meal.

Though

Though the laborious ploughman may indulge with impunity, in a plentiful ſupper of animal food, yet indolent perſons of fortune muſt be oppreſſed by it.

This oppreſſion does not proceed from ſupper being a leſs wholeſome meal than dinner; but becauſe none but the laborious can bear repeated full meals of animal food in one day.

Celſus and *Pliny* tell us, that the ancient Romans made a very ſlight meal at mid-day, but ate a full, but early ſupper; and as perſons of faſhion, in almoſt every nation but ours, dine early, ſupper is to them an inoffenſive meal.

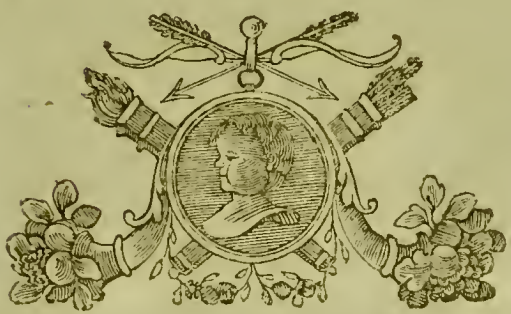
The truth is, we do not divide our meals properly; and imperfect and oppreſſive digeſtion is a neceſſary conſequence.

As it appears, from experiments, that the foods rarely remain longer than ſix hours in the ſtomach, our meals ought to be regulated by this circumſtance: and early breakfaſt and dinner will enable us to make an early ſupper, and by this means the extremes of repletion and long faſting may be avoided.

Our ſolid foods ought to be well maſticated or chewed, not only that the ſaliva may

may be copiouſly ſecreted and blended with them, and leſs labour impoſed on the ſtomach; but becauſe foods, when thrown too haſtily into the ſtomach, diſtend its coats too ſuddenly, and conſequently weaken them.

We may conclude this ſection with an old adage, that ſuch as ſet a due value on health ought to remember that "We eat to "live, and do not live to eat."



CHAP.

CHAP. VIII.

QUALITIES OF DRINKS.

Neceſſity for, and uſe of Drink—Water, in general, the only neceſſary Drink—at what time of Life fermented Drinks proper—Water, even for the laborious, ſufficient Drink—Inconvenience of ſitting long over the Bottle after Meals—Effects of Dram-drinking—Signs of Exceſs in the uſe of Strong Drinks—Improper Practice of Young Men after Debauch—Occaſional Exceſs why improper.

PROP. VI. THE QUALITY OF DRINKS USED BY PERSONS IN HEALTH OUGHT TO BE SUCH AS MAY PROMOTE THE DIGESTION AND ASSIMILATION OF OUR FOODS, THE DILUTION OF OUR HUMOURS, AND THE DUE REGULATION OF OUR SECRETIONS AND EXCRETIONS.

§. 56. WE are perpetually violating nature; we eat without appetite, and we drink without being thirſty.

Though the digeſtive humours are ſecreted very copiouſly, yet they are not ſufficient without

without the addition of ſome liquid. Thoſe who make ſoups a part of their meals, require very little drink.

Drink is of uſe in ſupplying our blood with watery particles, not only to render the circulation more free in the minute veſſels, but to promote the ſecretions, eſpecially of the digeſtive humour; and waſh out, by the different excretions, the uſeleſs and noxious parts of our bodies.

It will not, I think, admit of a doubt, that water is the only drink neceſſary for a perſon in firm health, eſpecially in the earlier periods of life; and that fermented and ſpirituous liquors, of which luxury has introduced a great variety, ought to be appropriated *ſolely* to the comfort of invalids, and the invigoration of old age. It may here be proper to obſerve, that all drink beyond the gratification of thirſt is ſuperfluous and improper; and as thirſt is moſt urgent when the body is heated, care ſhould be taken that cold drinks, eſpecially water, be uſed with great caution when the body is in that ſtate, as the moſt dangerous conſequences may enſue.

To the credit of the preſent age, hard drinking is rarely practiſed by perſons of liberal

beral education; though, from the habit of ſitting at table ſome hours after meals, we are tempted to exceed in the quantity of wine; which, in perſons in health, retards digeſtion, and increaſes the temporary fever which attends that proceſs.

It will ſcarcely be neceſſary to remark, that ſtrong drink of any kind is improper before dinner, and that dram drinking is a ſordid and deſtructive practice.

It would not be conſiſtent with my plan to enter into a minute detail of the bad conſequences of occaſional or habitual exceſs in the uſe of ſtrong drinks; it is certainly productive of many diſeaſes, and equally enervates the faculties both of body and mind. Spirituous liquors are however much more injurious than thoſe that are fermented; and many perſons, of all ranks in this kingdom, are yearly deſtroyed by dram-drinking. Some phyſicians alledge that it deſtroys the villous coat of the ſtomach, and coagulates the blood; it is more probable, however, that it weakens the ſenſibility of the ſtomach, and brings on a degree of *palſy* of the organ.

It has been alledged, that the laborious require ſtrong drink; but, I believe it is not neceſſary,

neceſſary, even to them; though a moderate uſe of it may not be very improper.

But as my readers will not be of that claſs, it is unneceſſary for me to enter on the ſubject.

Men of fortune do ſometimes, in purſuit of pleaſure, undergo more labour than the ploughman. A fox-hunt was formerly a prelude to a debauch, and fuel was thereby added to fire; but the practice is now leſs frequent. I ſhall take notice of this practice under the head of exerciſe, and ſhall now proceed to remark, that as I do not expect that any admonition of mine ſhall induce my male readers totally to relinquiſh the pleaſures of the bottle, I muſt be contented with endeavouring to regulate the uſe of it.

If, after the uſe of wine or other fermented liquors, a perſon finds himſelf heated, and his head clouded, he may be aſſured that his liquor is either bad in its kind, or that he has exceeded in quantity; eſpecially if his ſleep be diſturbed, and he feel himſelf heavy and oppreſſed next morning.

Some men are diſordered by a very ſmall quantity of ſtrong drink; that quantity, therefore, ought to be avoided, as it muſt be

to them an exceſs, by exciting an artificial fever, which will wear out the ſprings of life.

It is very much the practice with young men to take a doſe of ſalts to carry off the effects of a debauch; but it is very injurious, if frequently repeated: the beſt and ſafeſt means of removing theſe effects is by quiet and abſtinence.

It has been alledged that a little exceſs is allowable in perſons who are in health; but I think it would be more prudent to purſue a plan of regular temperance, rather than hazard the conſequences of occaſional exceſs; which, independent of the immediate effects, often degenerates into habit.

CHAP. VIII.

On the difference of Foods used by different Nations.

Diverſity of Foods uſed by different Nations—Vegetables the earlieſt Food of Man—different kinds uſed by different Nations—Fiſh uſed by Mankind before other Animals—Fleſh Meats not uſed till after the deluge—Different modes of preparing Food in different Nations—ſome without any preparation or Cookery—Effects of eating raw Animal Food—The moſt ancient mode of dreſſing Animal Food—Mode of feeding Animals for Food—Times of Eating among different Nations—Profuſion of former Times greater than the Elegance of the Table—Account of a Feaſt in the 14th Century—Luxury of antient and modern Times—Expedients for increaſing Appetite.

PROP. VIII. In different ages, countries, and climates, men have used different kinds of food, and have not only adopted different modes of preparing it, but have varied considerably with respect to the number of their meals, and the times of eating.

TO relieve my readers, I have allotted this chapter to their amuſement, and the gratification of their curioſity, though the enquiry will not be deſtitute of utility.

§. 57. It is probable that the primæval inhabitants of the earth were, for ſeveral ages, content with vegetable foods, and milk.

Fabulous hiſtory brands *Hyperboreus* the ſon of *Mars*, with the guilt of being the firſt who butchered the ox and ſheep for the gratification of his appetite. Before the practice of agriculture, herbs and roots muſt have been the chief food of man; and though Europe produces ſpontaneouſly, only berries, acorns, and cheſnuts, yet our anceſtors were probably long contented with this ſimple food; for the grains and fruits we now cultivate, were originally brought from Aſia.

Thoſe of the *Bramin* caſt in India ſupport themſelves at this day entirely on vegetable diet, animal food being prohibited by their religion; and, from the antients of this tribe, the *Pythagoreans* probably borrowed the hint for a ſimilar regulation of their diet.

The *Arabs* feed on dates and milk, the *Braſilians* on honey, caſſava, or manioc, a poiſonous root, and the fruit of the caſhew or acajou. The firſt Chriſtian *Hermits* in the Thebais, or upper Egypt, lived on roots and water, a practice which ſeems to have been adopted by ſeveral rigid monaſtic orders.

The

The inhabitants of the *Appenines* live chiefly upon cheſnuts. The peaſants of the *Genoeſe* territory live upon bread, oranges, lemons, and olive oil; and the *galley-ſlaves* of France and Italy are fed on bread and water.

Various inſtances have occurred of perſons in every age, who, either from whim, or a conviction of the ſuperior wholeſomeneſs of the diet, have lived for a conſiderable time on vegetable foods; and the great Sir *Iſaac Newton*, whilſt he was writing his treatiſe on Optics, lived almoſt entirely on bread, and wine and water.

There have been various ſubſtitutes for bread in different countries; as the bread-fruit, the caſſava, plantain, yam, edda, &c. The *Egyptians* uſed the root of the papyrus; the *Laplanders* the inner bark of the pine tree, and the bones of fiſhes; the *Siberians* the root of the lily; and the *Ethiopians* acorns.

§. 58. *Fiſh* were probably the firſt animals uſed as food. The inhabitants of *Caramania*, and *Gedroſia*, provinces of *Perſia*, not only fed themſelves, but their flocks, with fiſh; and were therefore called by *Herodotus* and *Strabo* Icthyophagi, or fiſh-eaters. The *Egyp-*

tians, whilſt the *Iſraelites* reſided in that country, lived on fiſh; and the *Banians* eat no other animal food.

The miſerable inhabitants of the northern countries of Europe, as thoſe of Iceland, Lapland, Greenland, and even the Orkneys, who have ſcarcely any vegetables, live chiefly on fiſh; and ſome of them are peculiarly fond of a rancid and putrid preparation of the row, which is called *cavear*; and it is a ſingular circumſtance, that the *garum* of the Romans was of this kind, of which they were ſo fond, that *Suidas* and *Seneca* tell us they purchaſed it for nearly its weight of gold. The *Arabs* eat locuſts, and other nations toads and ſcorpions, which, in their nature, are not very remote from fiſh.

§. 59. *Fleſh meats* were probably not uſed till after the deluge, the trees and herbs being unfit to yield any food, from the ſtate they muſt have been left in by the inundation. Though civilized nations have very much reduced the variety of meats uſed as foods, and confined them chiefly to thoſe of animals which feed on grains and graſs; yet many others were, and are now uſed, of which we ſhould think with averſion.

The *Greeks*, as *Hippocrates* tells us, ate puppies, horſes, and aſſes; the *Otaheitans* eat dogs; the *Negroes* of the Gold Coaſt of Africa, eat dogs, cats, and rats, as do the northern *Tartars*, who not only allay their hunger by bleeding their horſes occaſionally, and drinking the blood; but, as well as the *Arabs* and *Patagonians*, eat the horſe, aſs, and camel. Beaſts and birds of prey have been rarely eaten from choice, becauſe of the rankneſs of the fleſh; though it has been aſſerted that the meat of the lion and tiger has been found to be not inferior to veal.

Some perſons have a peculiar curioſity to taſte every thing that they can procure; and I knew a lady who indulged herſelf in this way, to a ſtrange degree.

Though the account ſome travellers have given of *anthropophagi*, or man-eaters, was not credited by many, yet we are now well aſſured that the inhabitants of *New Zealand* eat human fleſh; but whether as a common food, or only of their priſoners taken in war, has not been aſcertained.

§. 60. *Preparation of Food.* The primæval inhabitants of the earth certainly ate both their

their vegetable and animal foods raw; and to this day, ſome of the *African* nations, the *Eſquimaux* Indians, *Patagonians*, and *Samocides*, devour raw fleſh and fiſh, and drink the blood of the animals. Raw fleſh produces great bodily vigour, ferocity of mind, and love of liberty. Some years ago a girl was caught in France, ſuppoſed to be of the *Huron* tribe, who had all the ferocity, ſtrength, and agility of a wild beaſt; but when Madam *Le Blanc*, as ſhe was called, was a little civilized, and brought to live on dreſſed meats, ſhe loſt much of her ſtrength and agility.

Individuals in different countries have lived on raw meats. The famous philoſopher *Zeno*, the firſt of the Stoic ſect, uſed all his food raw; and the celebrated *Diogenes*, the cynic, unwilling to be outdone by his brethren the dogs, attempted to live on raw meats; but it is ſaid that the practice deſtroyed him.*

The moſt ancient way of dreſſing meats was by roaſting or broiling, as appears from

* To obviate critical cenſure, I would juſt obſerve, that though *Horace* calls *Diogenes* a dog, yet the term cynical was not applied to the ſect, from the ſuppoſed ſimilarity of their diſpoſition to that of dogs, but from the name of the place where his ſect met.

Homer;

Homer; boiling was of later invention, though this mode of cookery ſeems to have been known to *Moſes*. It would be unneceſſary to trace the origin of the various refinements in this art; though many of them are undoubtedly borrowed from the ancients, yet we certainly excel them in the elegance and variety of our cookery.

To render foods more palatable and digeſtible, ſome preparation ſeems to be neceſſary.*

§. 61. *Feeding of animals deſtined for food.* Attention has been paid to the mode of feeding animals, ſo as to render their fleſh more firm and nutritive, and to give them a certain degree of fatneſs; as it has been found that the lean of fat meats is more palatable. Our animal foods are not now ſo nutritive and wholeſome as formerly, from the practice of

* It may not be improper to remark here, that the common mode of boiling animal and vegetable foods is, in every point of view, very improper, unleſs for the purpoſe of preparing ſoups or broths; becauſe they are much better prepared by being expoſed to the ſteam of boiling water; and in this way ſea water anſwers the purpoſe as well as freſh, as is evident from experiments. On the principle of œconomy it is preferable, as a much ſmaller proportion of juices is loſt in this way than by boiling in the common way; and leſſening the expenditure of freſh water may be often an object worthy of attention during a long voyage.

feeding

feeding oxen with linſeed-cakes, and ſome other animals with very improper foods.

It has been thought neceſſary to deprive the animal as much as poſſible of its blood, as the meat is thereby longer preſerved from putrefaction; for blood is not an unwholeſome article of food; but by over-driving thoſe animals to ſlaughter, the blood is ſo diffuſed in the cellular membrane, that it cannot be emptied by bleeding, and the meat is heavier, to the benefit of the butcher.

Meats, when dreſſed ſoon after the death of the animal, are not ſo juicy, palatable, or eaſy of digeſtion, as when kept a moderate time, ſo that they may acquire a ſmall degree of putreſcent tendency.

Without referring to the practice of the *Eſquimaux* and *Hottentots*, who feed upon rancid and putrid meats; ſome civilized nations have adopted the ſame goût.

The cookery of vegetables not only renders them more ſoluble in the ſtomach, but deprives them of a very conſiderable quantity of air, the fruits eſpecially; inſomuch that an apple contains a quantity of air forty-eight times its own bulk.

§. 62. *Times of eating.* With reſpect to the times of eating, the moſt natural and obvious inducement is hunger. But this, which ought to be the ſole rule, has, among civilized nations, yielded to cuſtom and convenience; and hence it is that in different ages and countries, different hours have been allotted to ſet meals; and ſuch is the influence of cuſtom on our appetites, that they accommodate themſelves to it.

The ancient *Greeks* and *Romans* had four meals a day; the Romans, beſide breakfaſt, made a ſlight meal about mid-day, ate their ſupper about three or four o'clock, and it ſhould ſeem that the *comeſatio* was a later meal than that of ſupper; though it was not probably a conſtant one, except amongſt the higher ranks, who, in the latter ages, practiſed the moſt expenſive and even ridiculous refinements of luxury.

As our anceſtors breakfaſted early, they dined about eleven or twelve o'clock, and had at leaſt two meals after this, as appears from the allowance appointed for a *Lady Lucy*, who ſeems to have been one of the maids of honour in the court of Henry the VIIIth. I ſhall tranſcribe this, as a matter of curioſity,

to ſhew in what manner the *fine* ladies lived in thoſe days.

This lady was allowed for breakfaſt, a chine of beef, a loaf, and a gallon of ale;—for dinner, a piece of beef, a ſlice of roaſted meat, a loaf, and a gallon of ale;—afternoon, a manchette, (which ſeems to have been a loaf of coarſer bread) and half a gallon of ale;—for ſupper, a meſs of porridge, a piece of mutton, a cheate, (or finer loaf) and a gallon of ale;—after ſupper, a manchette loaf, a gallon of ale, and half a gallon of wine.

This lady therefore, ate five times a day, and though there does not ſeem to have been much variety, there was at leaſt great plenty, both of meat and drink.

The wine ſeems to have been reſerved for her Ladyſhip's evening draught; and if the ladies of this rank were diſpoſed to be ſociable, each, *by clubbing her bottle*, might, by a convivial compotation, be elevated to a *gaité de cœur*, which their ſucceſſors have never experienced from the modern beverage *tea*.

In *Birch*'s Life of Henry Prince of Wales, we have a curious account of the bill of fare for each table of the houſhold; in which there

there ſeems to have been greater plenty, than variety of diſhes.

We have an account of the breakfaſt of an Earl and Counteſs in Lent, viz. a loaf of bread, two manchettes, a quart of beer, as much wine, two pieces of ſalt fiſh, ſix baconed herrings, four white herrings, or a diſh of ſprats. This was a tolerable meal for a faſt-day, eſpecially as it was one meal of four.

It is worthy of notice, that perſons of high rank ate their meals earlier than thoſe of the middling and lower. A woman of quality would not now conſent to breakfaſt at ſeven, dine at ten before noon, ſup at four, eat her livery meal between eight and nine at night, and go immediately to bed.

Were the modern fine ladies to conform *in ſome degree*, to ſuch *ſober* hours, their healths, their fortunes, and in a *few* inſtances, perhaps their *reputations*, might ſuffer leſs than they do at preſent.

At public entertainments, however, it appears that our anceſtors indulged in a variety, nearly equal to that which is exhibited at a modern Lord-Mayor's feaſt, though far exceeding it in the plenty and the expence.

In 1470, *Nevil*, Archbiſhop of York, gave an entertainment to the nobility, gentry, and clergy, in which the following articles were uſed:—300 quarters of wheat, 300 tons of ale, 104 tons of wine, 1 pipe of ſpiced wine, 80 fat oxen, 6 wild bulls, 300 pigs, 300 hogs, 300 calves, 200 kids, 1004 ſheep, 3000 geeſe, 3000 capons, 4000 ducks, 4000 rabbits, 2000 chickens, 100 peacocks, 200 cranes, 204 bitterns, 400 hernſies, 200 pheaſants, 500 partridges, 4000 woodcocks, 400 plovers, 100 curlews, 100 quails, 1000 eggets, 200 rees, 4000 bucks, roebucks, and does, 155 hot veniſon paſties, 4000 cold veniſon paſties, 1000 diſhes of jellies, 2000 hot cuſtards, 4000 cold cuſtards, 400 tarts, 300 breams, 8 ſeals, 300 pikes, and 4 porpuſes.

To prepare this immenſe entertainment, there were employed 1000 cooks, 515 ſkullions, and 62 kitcheners.

The following bill of fare may be conſidered as a contraſt to the Archbiſhop's feaſt; it was given eight years after, viz. 1478, by the Wax-Chandler's Company. The whole did not exceed ſeven ſhillings, and yet the maſter ſwore the pig was too dear by a penny; the price of each article is annexed:

A loin

	s.	d.		s.	d.
A loin of beef	0	4	A gooſe -	0	6
2 loins of mutton	0	8	A leg of mutton	0	2½
2 ditto of veal	0	8	An hundred eggs	0	8½
A pig -	0	4	Red wine a gallon	0	8
A coney -	0	2	Ale a kilderkin	1	8
A dozen pigeons	0	7			
A capon -	0	6		7	0

Luxury. Civilized nations, in all ages, not content with living plentifully, have placed much of their gratification in luxurious indulgence. Beſide *Heliogabulus*, the prince of gluttons, many of the principal men of every country have been equally attentive to cultivate the principles of cookery as of politics; but none exceeded the celebrated *Count Zinzendorf*, chief miniſter to the Emperor Charles VIth.

The Count, who kept a ſplendid and very elegant table, was always inacceſſible for an hour before dinner. Various were the conjectures concerning the purpoſes to which he dedicated this time. One of his gueſts, by means of a bribe, procured a place where he could obſerve the miniſter, and diſcovered him with a napkin under his chin, taſting all the ſauces, and directing the diſhes with which they were to be uſed.

§. 63. *Epicures*,

§. 63. *Epicures*, not contented with their natural appetites, have uſed various expedients to whet them, which have, however, eventually tended to deſtroy all appetite. The beaſtly practice of the *Romans*, who took an emetic before they went to a feaſt, is not yet totally diſuſed; and I recollect an inſtance of an epicure's being diſappointed of a turtle-feaſt, by the effects of ipecacuanha taken a few hours before dinner. But a ſtill more deſtructive practice of drinking white wine, as a whet before dinner, and which has brought many worthy citizens to their graves, is now leſs frequent than formerly.

CHAP. IX.

Qualities of Foods and Drinks.

Comparative Digeſtibility of Foods; animal, vegetable, roaſted, baked, ſtewed, broiled, boiled—Quantity and Quality of Foods to be accommodated to Age, Sex, Temperament, Habit of Life.

PROP. IX. THE QUALITIES OF OUR FOODS AND DRINKS OUGHT TO BE SUCH AS MAY RENDER THEM GRATEFUL TO THE PALATE, EASY OF DIGESTION, AND ADAPTED TO THE NOURISHMENT OF THE BODY.

§. 64. WE have ſeen in the preceding chapter, that mankind, in different ages and climates, have uſed a great variety of foods, ſome without preparation, others changed by all the arts which luxury could ſuggeſt.

After the experiments, ſome of them contradictory, which have been enumerated in the preceding parts of this eſſay, it would be very difficult to eſtimate preciſely the relative

digeſtibility of animal and vegetable foods. It may however in general be remarked, that as vegetables contain fewer nutritious parts than animals, they are more eaſily digeſted; and as the nouriſhment they afford is leſs rich and permanent, a larger and more frequent ſupply of them will be required.

Nature has intended that there ſhould be a certain proportion between the waſte of our bodies and the ſupplies.

We can ſubſiſt longer on a meal of animal food than of vegetable; that is, we are ſooner hungry after the latter, which ſhews that its nouriſhment is ſooner exhauſted; and upon the whole, the ſtomach and the conſtitution in general are leſs oppreſſed by it; and yet there are ſome vegetables which are perhaps more difficult of ſolution in the ſtomach than animal foods.

Thus, Dr. *Stevens* found that mutton was more digeſtible than potatoe or cabbage; but that peaſe, beans, and the grains, were leſs digeſtible than other vegetables, the nuts perhaps excepted. It may not be improper to obſerve here, that ſome eminent phyſicians have conceived an opinion that potatoes contain ſome qualities that diſpoſe

to

to produce or exaſperate ſcrophula. Converſing with my friend Dr. *Stack* on this ſubject, that gentleman, who is a native of Ireland, and I, who have occaſionally viſited that kingdom, where potatoes form the chief part of the food of the poor, concur in opinion that the imputation is not well founded.

The lean of fat meats is more digeſtible than that of lean meats, becauſe the oily particles, when incorporated with the mucilage, render the juices of a more perfect animal nature.

§. 65. Fat, butter, and oil, have been, in general, conſidered as very difficult of digeſtion; and it has, moreover, been alledged, that they are very much diſpoſed to become rancid by the heat of the ſtomach. That theſe oily matters, if uſed in very large quantities and often, as food, may oppreſs the ſtomach by their tenacity or viſcidity, is very probable; but as oil conſtitutes a very conſiderable part of our foods, both animal and vegetable; as the red part of the blood is ſuppoſed to conſiſt chiefly of oil, and as a large quantity of oil is depoſited in various parts of the body, chiefly in the form of fat; it can

hardly be conceived that a principle which is ſo predominant in our bodies, ſhould be inimical to health, but the contrary; though all its uſes in the œconomy may not as yet have been aſcertained.

With reſpect to the uſe of oil and fat in a rancid ſtate, it may be offenſive to the nerves of the ſtomach of perſons who have not been accuſtomed to ſuch food; but the hardy ploughman eats his ruſty bacon without inconvenience. Rancid fat and oils are a conſiderable part of the foods of ſome nations; and it is a curious fact, that ſome men who wintered in Greenland, being exceedingly afflicted with ſcurvy, found, that whilſt their ſalt proviſions increaſed the diſeaſe, the whale fritters, though mouldy and rancid to a high degree, rather retarded its progreſs.

It has been ſuppoſed by ſome, that broiled, roaſted, and fried meats are more difficult of digeſtion than boiled or ſtewed: boiled meats are certainly leſs nutritive, becauſe a conſiderable part of the juices is loſt in the boiling; the ſame objection cannot be made to ſtewed meats, but they are often too highly ſeaſoned.

The pupils of the Boerhaavian ſchool, of which Dr. *Cadogan* is now almoſt the only ſurvivor,

ſurvivor, have been very tenacious of the hypotheſis which attributes moſt diſeaſes to faults of the humours; and every *Lady-Doctor* and old apothecary talk with great confidence of foul and groſs humours being bred by the uſe of butter, and therefore reſtrain children and young people from the uſe of it. I have already made ſome remarks on the ſuppoſed contaminations of the blood, vol. I. p. 9, 108, 138, &c. to which I refer, and ſhall here make ſome farther obſervations.

1ſt. If children are diſpoſed to be groſs and fat, the uſe of butter may be improper, becauſe it may increaſe the diſpoſition to corpulency; otherwiſe a moderate uſe of freſh butter may be of uſe, as it may check the acid fermentation which is generally prevalent in the ſtomach at this period of life; and as all oily matters are confeſſedly ſlow of digeſtion, they may contribute to a longer retention of the foods in the ſtomach; for in briſk and active children, it is probable that, as the appetite is too keen, the food does not remain long enough in the ſtomach to undergo the neceſſary changes, ſo that it paſſes into the inteſtines in a crude ſtate, and contributes to the generation of worms.

2*dly*. Boils, eruptions, and other *ſuppoſed* effects of foulneſs of blood, generally proceed from ſome faults of the perſpiratory veſſels, or ſuperficial glands, which retain ſome acrid particles which are generated even in the healthieſt bodies. Hereditary or infectious taints may ſeem to be an exception to this opinion; but there is no proof that they corrupt the general maſs of blood; it being more probable that they lurk in the ſecretory organs, where being accumulated to a certain degree, they manifeſt themſelves by tumors, eruptions, &c. this, at leaſt, ſeems to be the caſe with ſcrophulous infection.

3*dly*. Though Dr. *Cadogan* is not always very explicit in aſſigning his reaſons, it ſhould ſeem that his interdicting roaſted, fried, or baked meats, and ſuch as are ſalted or ſpiced, as being improper for invalids, proceeds from the idea of their creating impurities of the blood: I would obſerve, that ſuch foods as are moſt grateful to their weak ſtomachs are moſt likely to be converted into good nouriſhment, as I ſhall ſhew hereafter. With reſpect to the rancidity the animal juices are ſuppoſed to contract by heat in this mode of cookery, and which he ſeems to connect with

indigeſtibility

indigeſtibility and foulneſs of blood, his *ipſe dixit* is contradicted by experiment; for the Abbé *Spalanzini* found that dreſſed meats were more digeſtible than raw, and roaſted meats more ſo than boiled; and Dr. *Stevens*, from experiment, tells us, that the high-flavoured alcaleſcent meats are more digeſtible than the more inſipid.

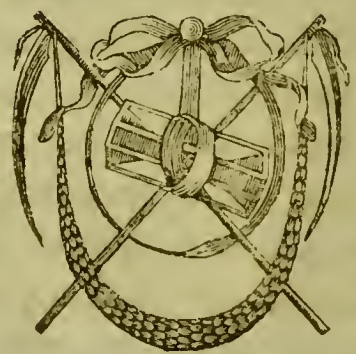
4*thly*. There are ſome facts juſt related above, which ſhew that rancidity is not ſo favourable to the generation of acrimony as has been ſuppoſed. Baron *Haller* found that ſuet contained a conſiderable quantity of acid, and it is probable that it is combined with all oily and fatty ſubſtances; and may therefore counteract their diſpoſition to alcaleſcent or putrid acrimony.

5*thly*. Theſe obſervations are made to invalidate opinions taken upon truſt, and not to vindicate the uſe of ſuch foods in the cure of diſeaſes; for they are certainly very objectionable in many caſes, as will be taken notice of in a future chapter, where the impropriety of admitting them as articles of diet, equally with thoſe which Dr. *Cadogan* recommends, is explained on different principles.

The

The firſt neceſſary ſtep towards the eſtabliſhment of truth, is the detection of error; and though it cannot be denied that certain acrimonies may be introduced into the body by infection, and even generated in the body; yet the idea of a general morbid ſtate of the blood being a frequent cauſe of diſeaſes, has often been productive of a frivolous or erroneous practice.

Having made theſe general remarks here, I ſhall occaſionally apply them hereafter.



CHAP.

CHAP. X.

Regimen of Diet for the prevention of Diseases.

Neceſſity for the Knowledge of Phyſiology in forming Indications for Regimen—Food of Infants —of Children—When they may uſe Animal Food—Food of Young Perſons, of Middle Age, of Old Age, of Women, of Studious Men—Diet to be adapted to different Temperaments, to the Way of Life, Seaſon and Climate——Important Remark on the Anticipation of Diſeaſe.

PROP. X. The quantity and qualities of Foods and Drinks used by persons in health ought to be accommodated to age, sex, constitution, way of life, season and climate.

THE reader may recollect that I divided foods and drinks into the ſtimulating and ſedative, which may be denominated the high or low regimen; and I ſhall make uſe of this diſtinction in regulating the diet.

If

If the knowledge of phyſiology be neceſſary for forming indications of regimen with regard to general health, it muſt be much more ſo when it is to be adapted to all the circumſtances enumerated in the general propoſition; for the ſtate of the body, its organs and functions, being different under each, a knowledge with reſpect to the ſtate of the body which conſtitutes theſe differences, muſt not only be an object of curioſity, but of real importance, to thoſe who ſet a due value on health; eſpecially as it may be attained by dedicating a few hours to the ſtudy of it: and ſurely it muſt be more agreeable and ſatisfactory to every perſon of underſtanding, to comprehend the reaſons for this or that mode of regimen, deduced from eſtabliſhed principles, than to rely on the mere *ipſe dixit* of an author or practitioner, who, in his dictatorial precepts, may be actuated by prejudice or caprice.

The ſubject of this chapter will be better underſtood after a careful peruſal of §. 91, p. 192; §. 99, 100, &c. Vol. I. Eſſay I. p. 222, &c. and Eſſay on Regimen, §. 27, p. 205; §. 39, p. 224; and §. 49, p. 251.

Infants ought, in the earlieſt period after birth, to be fed with the milk of the mother alone;

alone; and it is exceedingly to be lamented that women of rank and fortune almoſt totally abandon their infant progeny to hireling nurſes, inſtead of themſelves diſcharging one of the moſt neceſſary and pleaſing duties of life.

Spoon meat may be given to them ſparingly before the fourth month; and biſcuit boiled with water and a little milk, or the cruſt of loaf, are much preferable to the pith of bread or flour, which are too glutinous, and produce acidities, coſtiveneſs, or ſevere purging. Children ought to be fed very frequently: when they have teeth, a little animal food may be allowed them.

Young people in good health ought to uſe broths, and a large proportion of vegetable food: water their only drink. From the age of 25 to 55 the quantity of food ought not to be ſo great as in earlier periods, becauſe the growth of the body having been compleated, no more is neceſſary than to ſupply the daily waſte. If any wines are uſed, they ought to be light and thin.*

After 55, the quantity of ſolid foods ought to be gradually leſſened, and broths and other liquid foods ſhould make a part of the diet

* See Vol. I. p. 201, &c.

of

of old age; and the moſt alcaleſcent and digeſtible animal foods, with a moderate proportion of ſpices, will be beneficial; as the appetite becomes leſs keen, and the ſprings of life more feeble and languid at this period. Fermented drinks and generous wine are allowable at this period *only*, to ſupport the vital powers, and keep up the languid circulation.

Women, being more ſedentary than men, require a leſs proportion of ſtimulating foods; eſpecially if they are ſtrong, and diſpoſed to be of a ſanguine habit.

If ſedentary and ſtudious men prefer the enjoyment of a clear underſtanding and a ſerene mind, to robuſt health, they muſt be ſparing in the uſe of animal food and ſtrong drink. If the body is pampered, the powers of the mind are weakened; and as ſome ingenious men have become gluttons and drunkards, ſo their intellects have always been proportionably weakened and debaſed.

§. 66. *Temperament.* The temperaments are deſcribed Vol. I. Eſſay I. p. 222, &c. and it is obvious that the diet ought to be ſuited to them.

Perſons

Perſons of a *firm* habit generally eſtabliſh conſtitutional vigour by exerciſe; and as their digeſtive powers are ſtrong, and the waſte of the body conſiderable, they are apt to indulge too much; but they ought to avoid exceſs, as their diſeaſes are generally inflammatory and violent. Strong drinks ought to be uſed with moderation, as they are often the cauſe of fatal fevers.

In the *delicate* temperament, the vigour of the vital powers and circulation being leſs than in the firm habit, and the nervous ſyſtem much more irritable, a moderately ſtimulating regimen is moſt ſuitable to this habit: tea, eſpecially, ſhould be avoided, and ſtrong drinks uſed ſparingly.

Thoſe of a *ſanguine* habit ſhould avoid ſtimulating foods and drinks; and as they labour under an exceſs of good blood, their foods ought to be chiefly vegetable, their drink water.

If perſons of this habit have irritable nerves, which is not unfrequent, eſpecially in young women, the regimen of the delicate temperament ſhould ſeem to be beſt ſuited to this ſtate of the nerves, but the fulneſs of blood renders it improper and unſafe; for

it

it would not only exaſperate the nervous irritability, which is ſupported by an over-tenſion of the blood-veſſels, but endanger fever.

Perſons of a *phlegmatic* habit ſhould uſe more animal than vegetable food; muſtard will be a proper addition, but oily and fat food will diſpoſe to unweildy corpulency: coffee will be preferable to tea; and they may indulge in a moderate uſe of ſtrong drinks, eſpecially cyder and wine.

Perſons of a *dry* temperament, in the younger and middle periods of life, ſhould live chiefly on young meats, fruits, and the aceſcent vegetables, as their conſtitutional heat is generally conſiderable, their humours alcaleſcent, and their ſecretions, eſpecially the *bile*, diſpoſed to be acrid: water will be their ſafeſt drink; or if they cannot abſtain from ſtrong drinks, cyder and ſmall wines will be moſt eligible, or rather leaſt injurious.

As perſons of this habit are ſometimes, in the advance of life, diſpoſed to become hypochondriacal, from weakneſs and depraved ſenſibility of the ſtomach and other digeſtive organs; this change of the conſtitution, which is often connected with irregular gout, will

will require a change of regimen; and a moderate uſe of ſtimulating foods and drinks may become not only proper but neceſſary.

Theſe remarks on temperamental regimen, though intended chiefly for the information of the young practitioner, may eaſily be comprehended by every other intelligent reader, who has peruſed Vol. I. Eſſay I. p. 224.

§. 67. *Way of Life.* With reſpect to the accommodation of diet to the way of life, the neceſſity of this is ſo ſelf-evident, that it may only be remarked, that the diet of a ploughman would oppreſs the digeſtive and vital organs of a ſedentary perſon; and that a ſpare diet, chiefly of vegetables, would not ſupport a labouring man.

§. 68. More animal food is required in cold than hot climates; in winter and ſpring, than in ſummer and autumn. With reſpect to drinks in this temperate climate, fermented drinks and ardent ſpirits ought to be uſed very temperately in all ſeaſons. From the Northern nations being much addicted to ſtrong drinks, and their having been repreſented by ſome of the ancients as producing a kind

a kind of temporary madneſs in ſome of the Eaſtern countries, it has been perhaps too haſtily concluded, that the uſe of them is improper in hot climates. The abuſe of them is certainly improper in any climate; but it is a well known truth to thoſe who have reſided in hot climates, that they are there very neceſſary, eſpecially to thoſe who are expoſed to intenſe heat, for the purpoſe of ſuſtaining the vital powers and nervous ſyſtem under its debilitating effects; nor, whatever may have been remarked in the days of *Ariſtotle*, among the Greeks, who were proverbially *jolly topers*, have I ever obſerved the ſtimulating effects of drunkenneſs to be more extraordinary in hot climates than in this country.

When a perſon is melting away in profuſe ſweats, in conſequence of long expoſure to the ſcorching rays of the meridian ſun, many very temperate men have found it to be indiſpenſibly neceſſary to ſwallow ſome ſtrong drink, eſpecially punch, even before dinner; as water and lemonade ſometimes render the diſcharge by the ſkin more profuſe, and ſometimes ſuddenly check it, by the action of the cold drink on the nerves of the ſtomach, and produce fever. A late very reſpectable friend

of

of mine, who had been a pupil of the celebrated Dr. *Boerhaave*, and long held a high office in one of our colonies, though exceedingly temperate in the uſe of ſtrong drinks, never failed, after a long mid-day journey, to ſwallow a glaſs either of ſtrong wine, or of rum undiluted; and in America, the porters, and others who labour during the heat of ſummer, being what they call *heat-ſtruck*, have died ſuddenly, unleſs they drank a large glaſs of rum immediately.

§. 69. Two remarks preſent themſelves, which have a direct reference to the ſubject of preventive regimen, and are very important.

1*ſt*. It certainly would be of great importance to have ſome general teſt by which we might be warned of the approach of diſeaſe. I have already remarked, that ſo long as we find ourſelves *lightſome* and alert, we may be aſſured that all the functions of the body go on well; but that ſomething is amiſs when we labour under a ſenſe of heavineſs and depreſſion, and that diſeaſe is not very remote. This approach to diſeaſe is generally connected with *obſtructed perſpiration*; and it will be right to enquire, by what error in

diet, clothing, &c. it has been produced, that it may be rectified.

2dly. As we ſwallow our foods by pounds, and our medicines by ſcruples and grains, much more is to be effected, when we are ſlightly indiſpoſed, by a regulation of diet, than even by medicine itſelf. If, therefore, we ſuſpect that we have exceeded in point of diet, or even if we have not, a degree of abſtinence for a day or two, and reſt, will often remove the uneaſy ſenſations. This is more peculiarly neceſſary when, according to the vulgar phraſe, we have caught a cold; which is always a conſequence of obſtructed perſpiration. The vulgar maxim of nurſing a cold, and ſtarving a fever, is very deſtructive; for though abſtinence on the approach of fever may often be neceſſary; yet with reſpect to colds it is almoſt always ſo, and a *ſpare* regimen may prevent many fatal conſumptions.

CHAP

CHAP. XI.

Regimen of Diet in Diseases in general.

Reaſons why the Principles of Regimen ought to be ſtudied by Invalids, and by young Medical Men—Various Gradations from Health to Diſeaſe—Diſeaſes from Exceſs of Motion—the general Signs of this Exceſs—Diſeaſes from Defect of Motion—general Signs of this Defect—Why the Signs of theſe extremes afford the Indications for Regimen—Principles of Regimen more ſimple than thoſe of Medicine; therefore more intelligible—Lady Doctors the proper Superintendants of Regimen—an eſſential Difference between Medicine and Regimen—Errors of Writers on Regimen—how Patients killed with Kindneſs—Effects of Regimen the beſt Criterion of the Nature of Diſeaſes—An important Hint to Practitioners—Degrees of Regimen.

PROP. XI. THE MANIFOLD DISEASES OF THE HUMAN BODY BEING VERY DIFFERENT IN THEIR NATURE, DURATION, AND TERMINATIONS, THE QUANTITY AND QUALITY OF FOODS OUGHT TO BE ACCOMMODATED TO ALL THOSE CIRCUMSTANCES.

§. 70. TO thoſe who have had curioſity and perſeverance to ſtudy thoſe principles of phyſiology and pathology, contained in the Natural Hiſtory, (vol. I.) which

are neceſſary to explain Regimen as a branch of ſcience, the remaining Chapters of this work will be ſufficiently intelligible: to ſuch as have not, they certainly will appear to be ſomewhat intricate and obſcure.

But I flatter myſelf there will be few ſuch; becauſe the principles of Regimen are much more ſimple than thoſe of medicine; and it certainly muſt yield much ſatisfaction to every perſon of liberal education, to be conſcious, that when they, or their relatives, are affected with diſeaſe, they may at leaſt be tolerable judges of what diet may be adapted to their caſes; though they may not chuſe to enquire into their medical treatment; and this degree of knowledge may be more neceſſary, as ordinary practitioners often, and phyſicians ſometimes, are more attentive to the uſe of medicine, than of regimen.

This Chapter being partly intended for the uſe of young medical men, (for the ſeniors will rarely deign to confeſs that they need information) I have entered a little more fully into the ſubject than otherwiſe I ſhould have done: But as medical men are taken from the common maſs of mankind, and are conſequently of different degrees of capacity, there

there is no reaſon why perſons of liberal education may not, with as much facility as any medical man, attain a competent knowledge of any one branch; though they may not be diſpoſed to enter ſo deeply into enquiries of this kind, as to take in the whole circle of the ſcience.

Thus much being premiſed, I proceed to offer ſome preliminary remarks.

§. 71. If we place firm health, as it were, in the center, there are various temperamental degrees of it on each ſide of the ſcale; ſo likewiſe there are various degrees of diſeaſe, which diverge, as it were, from general health; and tend toward exceſs or defect of the vital powers. See Vol. I. page 128, 192, &c.

The degrees of exceſs or defect of the vital powers, or circulation, from the higheſt point of the ſcale, or inflammatory fever, to the loweſt, or cachexy and dropſy, are very numerous; and the ſkill and ſagacity of the phyſician is required to diſtinguiſh thoſe degrees for the purpoſe of preſcribing medicine.

But leſs accuracy is neceſſary for the purpoſe of preſcribing regimen; and all that is

required in this caſe is, a general knowledge of the ſtate of the vital powers, which may be eaſily obtained by attending to the following circumſtances.

1*ſt*. When the pulſe is ſtrong, full, or both, and the countenance rather ruddy than pale, rather full than ſhrunk, whether with or without feveriſh heat or quickneſs of pulſe; whatever be the diſeaſe under which the patient labours; the *high* regimen, which comprehends the ſtimulating foods and drinks, ſhould be uſed with great caution; as it may increaſe the diſeaſe, by exciting the heart to violent exertions.

2*dly*. When the pulſe is weak, the countenance pale or ſallow, and ſhrunk or bloated; it is probable that the *low* regimen, or the ſedative foods and drinks, will be improper, as they will ſtill farther reduce the vital powers, which, from the ſymptoms, ſeem to be already conſiderably below par.

3*dly*. In regulating the diet and other non-naturals of the invalid or the ſick, it is not only neceſſary that the cauſe of the indiſpoſition or diſeaſe be avoided; but thoſe means uſed which are contrary to the nature of the morbid cauſe: This maxim will be underſtood from the following plain examples.

A is ſeized with an inflammatory fever from a debauch, violent exerciſe, or any other ſtimulating cauſe; it is not ſufficient that he merely avoid theſe cauſes in future; but he muſt uſe thoſe means which are recommended in the next chapter.

B, whoſe appetite and digeſtion are weak, is afflicted with a flatulent colic, from the uſe of particular vegetables; theſe ſhould not only be avoided; but moderately ſtimulating foods of eaſy digeſtion ſhould be ſubſtituted.

C, inhabiting a houſe in a low damp ſituation, has frequent returns of ague, low irregular fevers, or other complaints, which ſhew that the vital powers are weak; he ought to remove into a ſituation that is high and dry, and mend his diet.

D finds, that on almoſt every expoſure to the external air he is ſubject to rheumatic or gouty pains; his confining himſelf to his houſe or chamber to avoid the evil, will be improper; but he muſt make ſuch an addition to his clothing as may enable him to uſe that exerciſe abroad, which is indiſpenſibly neceſſary to afford him tolerably firm health.

4thly. A mere change of regimen, with reſpect to one of the non-naturals only, (diet,

for

for example) is not ſufficient; but a due attention ought to be paid to all the others, ſo that there may be a conformity between the whole; and hence the great advantage of underſtanding the principles of regimen, which can only be attained by a knowledge of the philoſophical and medical hiſtory of the human body and mind.

§. 72. By attending to the ſimple and obvious rules and maxims laid down in the preceding ſections, and a careful peruſal of the following chapters, every invalid of common underſtanding may be tolerably qualified to regulate the non-naturals; and here the *Lady Doctor* will be in her proper province; in which, as *ſuperintendant of regimen*, ſhe may render moſt eſſential ſervice to all her connexions, without incurring the danger of doing miſchief; which muſt ever be the caſe in every ſtep ſhe may take as a preſcriber of medicine, there being a thouſand circumſtances with reſpect to the latter which require a degree of diſcrimination for which ſhe is not qualified. With reſpect to diet of the invalid and ſick, it will be proper to guard them againſt one error into which they

they are very apt to fall, which is, their ſolicitude about nouriſhing the ſick with *good* things; for by thus oppreſſing the weak organs with foods which they cannot digeſt, thouſands may literally be ſaid to have been *killed by kindneſs*.

I ſhall here take occaſion to offer a general remark, of which the young practitioner may make an important uſe.

It has already been remarked,* that the particular nature of diſeaſes is frequently ſo obſcure, that the utmoſt ſagacity cannot diſcover it; and in ſuch caſes, it is evident, that it is at leaſt an even chance that medicines of any power may injure rather than benefit the patient. In ſuch a ſtate of uncertainty, it will certainly be prudent to give, in the form of medicine, what cannot produce any eſſential change; and in the mean time remark, very accurately, the effects of diet, which will often afford the ſafeſt clue to the *general* nature of the diſeaſe; and which being aſcertained, we ſhall have advanced one ſtep nearer to a knowledge of its *particular* nature.

* Difficulties of ſtudying Medicine, Vol. I. page 261, &c.

When

When the practitioner is called to a patient under the circumstances alluded to, if he find him under the use of a stimulating diet, it will be right to try the effects of a change; not only by abstinence from such foods and drinks, but a moderate use of the *low* regimen. If this change seem to alleviate the symptoms, it affords a proof that the heating stimulating medicines are not indicated.

On the other hand; if the patient has either been habitually abstemious, or has adopted the low regimen since the commencement of the disease, without any abatement of the complaints; a moderate trial of a more generous diet, and the use of strong drink, if it agrees, will indicate the use of warm stimulating medicines.

Thus, as it were, feeling his way, by means of regimen of diet, and the correspondent non-naturals, he will avoid that hazardous embarrassment which a precipitant use of remedies will often produce; because we cannot always distinguish the distress produced by disease, from that disturbance which proceeds from the operation of medicines. By this precaution of relying chiefly on regimen, he will have the satisfaction of knowing,

knowing, that if he cannot render his patient the moſt eſſential ſervice, he is not likely to do him very eſſential injury.

This hint may alſo be uſeful to the intelligent reader, who, if his medical preſcriber ſhall omit to direct his regimen, may, from the general rule now laid down, be tolerably well qualified to regulate it himſelf; always remembering, that a change of that mode of living under which the diſeaſe commenced, whether it was, or was not the cauſe, will be a much ſafer means of checking its progreſs than by tampering with magneſia, aloetic and analeptic pills, &c.

§. 73. Before we proceed, it may be proper to point out, in one view, the different degrees of regimen which will be recommended in the following chapters: Theſe I divide into the *high*, the *low*, the *moderate*, and the *alterative*.

1*ſt*. The *high ſtimulating*, cordial, or diſpenſing regimen, comprehends the uſe of highly-flavoured animal foods, (ſometimes ſalted) in preference to the inſipid, ſlippery, mucilaginous; and thoſe ſeaſoned with cayenne pepper or the ſpices, and rather roaſted

roaſted or broiled, than boiled, accompanied with the uſe of fermented drinks, and generous wines, warm cloathing and covering, exerciſe accommodated to the ſtrength, early riſing, and a very moderate proportion of ſleep.

2*dly*. The *low ſedative*, or reducing regimen; being the oppoſite of all theſe, will be treated of in the next chapter; and is that which is ſuited to thoſe diſeaſes in which the vital powers are exerted to a degree conſiderably above the natural ſtandard.

3*dly*. The *moderate* or ſpare regimen lies between thoſe extremes, and is that which is beſt adapted to that ſtate of the body which is frequently met with in ſlight indiſpoſitions, low fevers, not of the hectic kind, invalids, and convaleſcents. But this regimen cannot be aſcertained or deſcribed, as it depends upon a variety of circumſtances; but it is ever to be held as an invariable maxim, that it be more ſparing than what the patient has been accuſtomed to in health.

4*thly*. The *alterative* regimen is that which conſiſts in abſtinence from the uſe of animal foods and ſtrong drinks; and in a perſevering uſe, perhaps for life, of milk, vegetables, and light puddings.

§. 74. As

§. 74. As we are now to conſider the employment of regimen in diſeaſes, it may be proper to recollect the diſtinction which has been eſtabliſhed (page 147) between medicine, ſo called, and regimen. Dr. *Arbuthnot*, and ſome other authors on diet, have been very minute in aſcertaining the medical powers of diet, and have arranged the articles of it into claſſes correſponding with thoſe of medicine. Some articles, which are in daily uſe as foods, have medicated powers, but they are very ſlight; and there is ſomething ludicrous in the idea of ploughmen, porters, and chairmen, ſwallowing daily, cephalics, eccoprotics, diuretics, and antiſcorbutics, under the guiſe of beef and mutton, turnips and cabbage, ale and porter; an idea, by the bye, which theſe honeſt fellows would not much reliſh; but with more truth it might be alledged, that the imaginary invalid makes Anderſon's and James's analeptic pills a part of his *daily bread*. The influence of faſhion is wonderful; in the laſt century, Doctors converted food into phyſic; in this the patient converts phyſic into food.

CHAP.

CHAP. XII.

Regimen in acute Diseases.

Indications for Regimen in high Fevers—such Fevers how prevented or checked in the beginning—First Indication how complied with—The Means pointed out by the Second Indication—Hints to Mistresses of Families—Hints to Practitioners on some very important points of Practice.

PROP. XII. Morbid affections of the vital powers, which proceed from, or are accompanied with, violent increase of the circulation, *i. e.* high fever, necessarily require a sedative regimen; a due regard being always had to the vital indication.

AFTER what has been said in the preceding chapter, and in Vol. I. Essay 1st. page 144, 192, &c. the following remarks will be sufficiently intelligible.

§. 75. The

§. 75. The indications of regimen are,

1*ſt*. To avoid whatever may increaſe the violence of circulation;

2*dly*. To adopt that regimen which may be moſt conducive to counteract or mitigate the morbid affections;

3*dly*. To ſupport the powers of life.

§. 76. This firſt indication is ſatisfied by abſtaining from all the ſtimulants, Table II. Claſs 1ſt and 3d, and the condiments and ſtrong drinks, and avoiding exerciſe, ſtrong light, noiſe, and the ſtimulating paſſions.

Here it may be remarked, that many fatal fevers might be prevented, or checked in their commencement, were the rules laid down at the end of Chap. IX. attended to, and joined with the regimen laid down in this and the ſecond indication.

§. 77. The ſecond indication points out the reverſe of all theſe, viz. The uſe of the ſedative drinks, and liquid vegetable foods; ſuch eſpecially as are not very nutritive, and bathing the legs in temperately warm water. The inſtinctive averſion of the patient to animal foods, and the deſire of cooling ſub-

acid

acid drinks, point out clearly what ought to be done, and what avoided.

Here I beg leave to offer a few hints to miſtreſſes of families, who cannot diſcharge a duty more worthy of their ſex, whatever their rank may be, than by ſuperintending the regimen of the ſick, whether their relations, ſervants, or their indigent neighbours, and taking care that the good effects of diet and medicine be not counteracted by hot rooms, heavy bed-clothes, cloſe curtains, and heating drinks.

1*ſt*. *Colds* and *Coughs*, which are very frequent in this unſteady climate, very often terminate in fatal conſumption by neglect or miſmanagement. The regimen indicated above, 1ſt and 2d, ought to be rigidly adopted; and as medicine may be neceſſary, if the ſtarving plan does not ſucceed, I would juſt hint to the apothecary, that early bleeding and purging would be more conducive to the ſafety of the patient than ſaline draughts, and ſpermaceti mixtures.

2*dly*. *Pleuriſies* and *rheumatic fevers* may often be checked or much mitigated by the low regimen; *agues*, on the other hand, require a generous ſtimulating diet in the intervals

tervals of the fits, without which the bark will often fail; and apothecaries do not always attend to this circumſtance.

3*dly*. Many patients in the ſmall-pox and meaſles have been deſtroyed by a heating regimen, and the excluſion of cool air.

4*thly*. Many very uſeful members of ſociety have been loſt by the miſmanagement of women in child-bed.

As the body is very irritable during that ſtate, and there is a ſtrong diſpoſition to fever; hot rooms, and ſtimulating foods and drinks, ſhould be moſt carefully avoided.

5*thly*. Cleanlineſs is of the utmoſt conſequence in all fevers; and care ought therefore to be taken, that their ſick ſervants and indigent neighbours be enabled to change their linen and bed-clothes frequently; and they ſhould be enjoined, if not very weak, to quit their beds and rooms for a ſhort time daily, that both may be ventilated.

6*thly*. Profuſe diſcharges of blood may take place, and endanger life, before medical aſſiſtance can be obtained.

In ſuch caſes, the patient ought to be laid upon the bed, and very ſlightly covered; ſmall and frequent draughts of water, as cold

as poſſible, are to be ſwallowed; the doors and windows thrown open; and linen cloths dipped in the coldeſt water and vinegar ſhould be often applied to the parts that are neareſt to the bleeding veſſels.

If the patient faints from loſs of blood, he (or ſhe) ought not to be immediately rouſed by ſmelling bottles, or other ſtimulating means, becauſe the blood, by coagulating in the ends of the bleeding veſſels, will be the moſt effectual means of ſtopping the diſcharge. Though ſome perſon may be at hand who can bleed; if the patient has been in a weak ſtate, and the diſcharge has not been produced by ſome violent blow, bruiſe, or fall, and the pulſe is low and weak, bleeding may increaſe, inſtead of checking the diſcharge.

§. 78. The explanation of the 3d or vital indication is chiefly intended for the young practitioner; who is requeſted to pay due attention to it.

So long as the inflammatory ſtage of the diſeaſe continues, the low or ſedative regimen ought to be purſued very ſteadily, as the only means of ſubduing the diſeaſe.

But

But there is a certain point beyond which the ſedative regimen ought not to be extended; that is, when the vital powers are ſo much reduced, either by the violence of the diſeaſe, the ſedative operation of remedies, or the low diet, that life itſelf would be endangered by purſuing that plan. The third or vital indication takes place at this period; and as the management of this indication is a very nice and delicate point, much ſkill is required to avoid error.

1*ſt*. Practitioners may carry the reducing plan too far, and the patient either ſinks entirely, or, in attempting to cure the fever, he is diſciplined into a dropſy.

2*dly*. But it more frequently happens that ſufficiently powerful remedies, and an adequate regimen, being neglected in the beginning; the diſeaſe gains ground very rapidly, and the practitioner, alarmed by the increaſe of weakneſs conſequent thereof, ruſhes precipitantly into the uſe of highly ſtimulating remedies, before the inflammatory ſtage of the diſeaſe has ſubſided; and overwhelms the powers of life, by ſuperadding one ſtimulus to another. The celebrated Dr. *Sydenham* tells us, that a patient being apparently ſo

weak that he was doubtful whether he ſhould bleed him or not, he ventured to open a vein; the pulſe roſe, and the ſtrength increaſed as the blood flowed. Had the Doctor, by a falſe eſtimation of the real cauſe of the extreme weakneſs, ordered a cordial draught, inſtead of bleeding, his patient muſt undoubtedly have died.

3*dly*. Even when ſtimulants may be neceſſary to ſupport the ſtrength, inſtead of a cautious and temperate uſe of broths and wine, hot ſtimulating medicines are generally and very injudiciouſly preferred.

§. 79. In my remarks on the different kinds of fever, Vol. I. Eſſay I. page 146 to 150, I obſerved that ſome of them, either from their commencement, or in the advanced ſtages, were what are termed *low fevers*; from the pulſe being weak and very quick, the heat unſteady and unequal, and the ſtrength much depreſſed. Under ſuch circumſtances, whatever may be the nature of the fever, remittent, intermittent, nervous, putrid, malignant, &c. moderately ſtimulating foods and wine, either alone or diluted, will be much preferable to cordial and

and heating medicines. But as I have remarked in Eſſay I. page 152, ſuch low fevers are frequently accompanied with inflammation of particular organs, as of the brain, lungs, liver, ſtomach, inteſtines, or meſentery; a contra-indication ariſes, which is exceedingly perplexing; for, whilſt the great debility of the vital and nervous ſyſtems demands the uſe of ſtimulants; they are contraindicated by the local inflammation, which renders theſe fevers much more fatal than their general nature. In ſuch complicated caſes, the uſe even of ſtimulating diet ought not to be carried farther than juſt to ſupport the conſtitutional powers to ſuch a degree, as may enable it to give efficacy to the neceſſary remedies.

CHAP. XIII.

Regimen of Diet for Invalids and Convalescents.

This Chapter intended for the Information of Valetudinarians—Invalids what; Connection of their ſtate with particular Temperaments—Cachexy what—Imaginary Invalids, Advice to them—Convaleſcents what—Advice to the Ladies concerning the Management of them—Diet of Invalids and Convaleſcents; Breakfaſt, Dinner, Supper.

PROP. XIII. Regimen of diet adapted to invalids and convalescents ought to be such as may not oppress the weak organs, due regard being had to the state of the vital and digestive organs.

THIS chapter is chiefly intended for the uſe of thoſe who undertake the management of their own regimen, and interpoſe, too frequently, and always very improperly, the uſe of remedies, either on their own ſuggeſtion,

geſtion, or of thoſe who are very little, if at all, better qualified to direct on ſo important an occaſion. I have already, p. 290, made ſome remarks on the uſe of medicines as preventives of diſeaſe.

§. 80. Invalids or valetudinarians are either ſuch whoſe conſtitutions have always been weakly;—or ſuch as have been brought into this ſtate by former diſeaſes, from which they never perfectly recover;—or ſuch as gradually decline in their ſtate of health, and remain in a ſtate verging toward diſeaſe, without labouring under any diſeaſe to which a name can be given.

I ſhall make ſome remarks on each of theſe.

§. 81. The ſtate of the firſt kind of invalids may be underſtood from what is ſaid on the delicate temperament, Vol. I. Eſſay I. p. 225; and the regimen beſt adapted to this ſtate, from what is ſaid p. 293 of this volume.

Thoſe whoſe health has been impaired by former diſeaſes, have generally a weak and irritable ſtate of the nerves, and therefore in many reſpects reſemble the former.

Perſons

Perſons who come under the laſt head, are ſuch as are ſaid to labour under a *cachexy* or bad habit of body; and as this ſtate ſeems to be only an increaſed degree of the phlegmatic temperament, (Vol. I. Eſſay I. p. 226, &c.) therefore the regimen of diet for this habit (p. 244) will be well adapted for cachetic patients, whoſe pale, ſallow, bloated, and ſometimes jaundiced complexion, ſhortneſs of breath on the leaſt motion, and a tendency of the ancles to ſwell towards evening, ſhew that the vital powers are languid, the organs in a torpid ſtate, and that there is a ſtrong diſpoſition to palſy, dropſy, and a variety of other chronic diſeaſes; which may be prevented by a *moderately* ſtimulating diet, and ſuch a degree of muſcular exerciſe as may give vigour and energy to the languid vital and nervous powers; ever remembering, however, that invalids of every deſcription ought carefully to avoid every kind of exceſs, by which the digeſtive organs may be weakened, and the vital and muſcular powers overſtrained.

There never, perhaps, was a period in which the number of invalids was ſo great in this kingdom, as at preſent, owing to a variety of cauſes.

But the moſt unhappy of the valetudinary tribe are thoſe who labour under imaginary diſeaſes, are "ſick by way of amuſement, "and melancholy to keep up their ſpirits;" *and whoſe chief comfort is the pleaſure of complaining.*

Perſons of this deſcription, irritable, timid, and anxious, by becoming the dupes of ſelfiſh practitioners, or ignorant quacks, fall into the very diſeaſes they ſo much dread, and drag on a miſerable life, the victims of vain fears, and abſurd credulity.

To ſuch miſerable beings I earneſtly recommend a ſerious peruſal of the very ingenious Mr. *Colman*'s farce of the *Spleen*; where, with much truth, wit, and humour, the whimſical invalid will find himſelf admirably deſcribed in the character of *Doily*.

Where there is no real diſeaſe, it ſcarcely need be obſerved that there can be no room for any other remedies, beſides what a generous diet, moderate exerciſe, and rational employment of the mind, enlivened occaſionally by inoffenſive amuſements, will afford them; and it will not, I truſt, be deemed an *empirical* puff, if I recommend for their information and amuſement, the "Natural "Hiſtory

"Hiſtory of the Human Body and Mind," which will guard them againſt thoſe ill-grounded apprehenſions which are often created, or at leaſt nurtured, by the preſent faſhionable reading of popular treatiſes on the practice of phyſic; and are confirmed by ignorant or unprincipled men, to the deſtruction of health and peace of mind, and, not unfrequently, the ruin of fortune.

Many deplorable inſtances of this kind occur almoſt daily, of unhappy hypochondriacs, who having run the gauntlope of regular and empirical practice, and being diſappointed in their expectations from *ſpecific and infallible remedies*, have at length recourſe to the brandy bottle; and a diſeaſe, at firſt imaginary, terminates in incurable palſy or dropſy.

§. 82. *Convaleſcents* are ſuch perſons as are recovering from diſeaſe. As the medical man often leaves his recovering patients without laying down ſuch rules of regimen as may ſecure them againſt relapſe; this buſineſs comes immediately under the cognizance of the *Ladies*, and it is recommended to them that they reſtrain the ſick, eſpecially ſervants and

and indigent neighbours, who are very apt to indulge a keen appetite after fevers, from paſſing ſuddenly from a ſpare and ſedative, to a full and ſtimulating diet. Many lives have been loſt for want of due precaution in this reſpect; for the organs being left very irritable by diſeaſe, a ſudden ſtimulus will eaſily rekindle a fever or inflammation.

I ſhall now proceed to make a few remarks on the diet of invalids and convaleſcents.

§. 83. *Breakfaſt.* The ordinary articles of breakfaſt, uſed by almoſt all ranks of people in this kingdom, are, tea, bread and butter.

From what I have ſaid on the properties of tea, it is evident that bohea is preferable to green, as being leſs ſedative; and with a conſiderable proportion of cream and ſugar, its bad effects may, in ſome degree, be counteracted.

Some perſons have ſubſtituted an infuſion of baum or ſage, which are weak aromatics, and probably preferable to the Chineſe plant; but I totally diſapprove of the practice of drinking either theſe, or chamomile tea, as a breakfaſt; a long and conſtant uſe of aromatics or bitters being very injurious to the ſtomach.

It were better if milk and water ſweetened were uſed, and rather cold than hot, gradually increaſing the quantity of milk, until the ſtomach can bear it alone, without ſugar; for wherever there is a tendency to acidity, as is almoſt always the caſe in the ſtomach of invalids, ſugar certainly increaſes it.

The objection to milk is its too ſpeedy coagulation in the ſtomach, in which caſe the coloſtrum, or curd, becomes ſo hard and tenacious, as to be ſcarcely ſoluble. Milk certainly does coagulate in every ſtomach; but when the coagulation goes on ſlowly, a portion of the groſſer part remains ſuſpended in the whey, and paſſes the lacteals, and the remainder is leſs firm and viſcid. Some medical men have recommended a ſmall portion of brandy or rum to prevent too ſpeedy a coagulation; but ſuch an addition is improper, and may create a bad habit. In a few caſes, I have adviſed a ſmall proportion of chalk or magneſia, either taken in a little water about a quarter of an hour before breakfaſt, or mixed with the milk, gradually leſſening the quantity as the acidity of the ſtomach is ſubdued.

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It is much to be regretted, however, that many invalids cannot bear milk as an article of diet; in ſuch caſes whey or butter-milk may be ſubſtituted. A gentleman who had been put upon a milk diet, and was recovering from a chronic diarrhœa, having drank ſome bad mulled wine at an alehouſe, and his milk on his return, was ſeized with an inflammatory conſtipation of his bowels. By the uſe of purgatives he not only diſcharged by vomit, but by ſtool, many large balls of coagulated milk, which had probably been accumulating for weeks; but his former diarrhœa recurred, and, after ſeveral weeks, deſtroyed him. The reader is referred to ſome remarks on milk, Chap. V. §. 21.

Coffee is uſed by ſome perſons as a breakfaſt; but though many medical virtues have been attributed to it, yet its predominant quality, as a ſedative, renders it objectionable, unleſs a conſiderable quantity of cream or milk be added to it.

Chocolate rarely ſits eaſily on the ſtomach of invalids, owing to the indigeſtible quality of all of the nut kind; yet when uſed very weak at firſt, and the proportion of the nut gradually

gradually increaſed, I have known it to ſit at length very eaſily: it is very nutritive.

New bread is certainly improper for invalids; biſcuit, or bread one or two days old, and toaſted, is preferable; and the houſhold or the ſtandard breads are better than that made with the fineſt flour. Doctor *Cadogan*'s ſevere interdict againſt bread is not well founded: ſee Chap. VI. §. 31.

What ſhall I ſay to butter, as an article of breakfaſt? Medical men have been almoſt unanimous in condemning it as an improper article of diet for invalids. Foods of an oily nature are certainly not the moſt eaſy of digeſtion, that is to ſay, they remain longer in the ſtomach than ſome other foods; but as butter certainly checks that fermentation which is prevalent in four ſtomachs, it may be of uſe; and if it contributes to the retention of the food in the ſtomach, the digeſtion, ſo far as depends on this organ, will be more compleat; and I believe one of the principal evils attending the indigeſtion of invalids, is, the foods being retained too ſhort a ſpace of time in the ſtomach, partly from its weakneſs, ſometimes from exceſs of irritability. Good freſh butter, therefore, with a moderate

rate proportion of ſalt joined with it, may, I think, be uſed at breakfaſt, eſpecially with tea; and thoſe who think it is rendered rancid by heat, though I am not of that opinion, may uſe it with cold toaſt. It will certainly be unneceſſary either with chocolate or milk. See Chap. V. §. 21, ſome remarks on butter.

Some invalids, being incommoded by all the liquid articles of breakfaſt enumerated above, have been ſolicitous to find ſubſtitutes.

One Gentleman, lately my patient, ate a bit of cold meat with muſtard, and found it ſat very eaſily, though it has not agreed with others to whom I have recommended it; others have found a cruſt of bread with a glaſs of cold water to be preferable to any other; and ſome have preferred a little plain ſoup with toaſt. In the wine countries, grapes and bread are often uſed as breakfaſt; and where the ſtomach will bear fruit, it would be a proper breakfaſt for invalids: ſee Chap. VI. §. 29, p. 210. The invalid may make his election, after trying all; nor can there be any objection to animal food for breakfaſt, if it does not incommode the ſtomach.

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I have remarked that invalids have, in general, wiſhed to avoid eating between breakfaſt and dinner, on the ſuppoſition that it would ſpoil their appetites for this grand and favourite meal. But as ſuch perſons eat very little at a meal, and few can bear faſting from ten in the morning to four or five in the afternoon, eſpecially if acid abounds in the ſtomach, a little ſoup with dry toaſt may be taken about one or two o'clock. I have ſeen very good effects from this practice being adopted by invalids. By taking food frequently, the ſtomach is leſs oppreſſed, and performs its office more compleatly; the fever of digeſtion is avoided, and too much chyle is not ſent into the circulation at once, which, by its ſtimulus, excites a kind of temporary fever, which certainly retards the nouriſhment of the body; and the ſlight repaſt I have recommended, prevents repletion from exceſs at dinner.

§. 84. *Dinner.* From the remarks already made, the reader will conceive, that when invalids labour under diſeaſes accompanied with weakneſs and acidity of the ſtomach, I ſhall recommend the moſt alcaleſcent

leſcent meats as preferable for the dinner meal; and thoſe rather roaſted than boiled; as their alcaleſcency is increaſed by this mode of dreſſing thoſe foods, and their nutrition is more concentrated. This injunction is peculiarly neceſſary for perſons who have gout flying about them, and cannot fix it; for by giving a ſpur to the conſtitution which creates, a degree of inflammatory diſpoſition or diatheſis, a regular fit may be procured.

A general obſervation of great importance occurs here. In the account given of the proceſs of digeſtion, it was remarked, Vol. I. Eſſay I. p. 161, that a conſiderable quantity of air is extricated or ſet looſe by the warmth of the ſtomach, and the diſſolution of the food. Two important inferences are to be drawn from it: *1ſt*. That the air, expanded by heat, adds very much to the bulk of the contents of the ſtomach, puffs it up, ſtretches and weakens the coats of this organ, very much interrupts digeſtion, and renders it very imperfect. *2dly*. That as dinner is the chief meal, and we not only ſwallow more at that than any other, and of ſuch a mixture of animal and vegetable foods as create, or rather part with, much air; all perſons, thoſe

eſpecially who have weak ſtomachs, ought to be cautious of uſing foods which afford much air; and moreover, as all foods afford more or leſs, they ought to leave off eating before there is any ſenſe of fulneſs, otherwiſe the air, in the courſe of digeſtion, will oppreſs exceedingly, and from want of due caution in this reſpect, many perſons in health weaken their ſtomachs, and many invalids have their digeſtive powers irreparably deſtroyed.

In this opinion, therefore, I diſſent from Dr. *Cadogan*, who not only recommends young meats, tripe, and other inſipid mucilaginous foods, ſo much under-boiled as to be half raw; but totally reprobates all animal foods, which are ſtimulating and alcaleſcent in their nature, or are rendered ſo by cookery, pickling, preſerving, or high ſauces; and yet the Doctor is ſo inconſiſtent, as to recommend broiled meats, which undergo a greater change by the force of fire in this way, than by any other mode of cookery.

I entirely accord with the Doctor in opinion, that where the digeſtive powers are ſufficiently vigorous, neither ſalted or ſmoaked meats or pickles are neceſſary or beneficial but when the digeſtive powers are weak

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which I ſuppoſe to be the caſe, I have known the moſt beneficial effects from indulging patients occaſionally with theſe reliſhing morſels, whoſe languid appetites and ſtomachs would have loathed the Doctor's inſipid regimen.

The habit of drinking tea or coffee in the afternoon is ſo general, that even invalids conſider it as indiſpenſible. It were better, however, to avoid theſe beverages, or drink only one diſh of either, provided no apparent bad effect be experienced from it.

§. 85. *Supper.* As invalids ought to take food frequently, I think there is too long an interval between even a late dinner and a late breakfaſt next day, (generally ſixteen hours) and therefore a ſlight ſupper of weak ſoup, milk, if it agrees, ſallad, or fruits, may obviate that ſenſe of emptyneſs and languor which the ſick often experience from long faſting.

Some invalids have paſſed a more comfortable night, after ſupping on a few oyſters or other ſhell-fiſh; and laſt ſummer I had a patient labouring under a hectic diarrhœa, who, tired of ſlops, inſiſted on being in-

dulged with prawns, and found himſelf much benefited by the exchange.

§. 86. It often happens that the moſt rational indication for the regimen of invalids, is to diſpenſe with all regimen.

A lady lately returned from a hot climate, was here three months under the care of an eminent phyſician. The Doctor precluded her from the uſe of ſuch foods as ſhe could have reliſhed, and was ſo rigid in confining her to a diet which ſhe loathed, that being in danger of being ſtarved, ſhe diſmiſſed her phyſician. During a conſiderable part of the time this lady had been in Bath, ſhe had laboured under a ſevere harſh cough, and an irregular fever, on which account ſhe was forbid the uſe of the Bath waters, and was put under a courſe of James's Powder, and other remedies, without relief. When I was conſulted, I gave her an unlimited permiſſion to eat and drink what ſhe pleaſed, but recommended a trial of ham and ſalted tongue, and Cayenne pepper in her ſauces; and as I conceived that her cough and fever were the effects of weakneſs and irritability, adviſed her having again recourſe to the Bath waters;

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her fever is gone, her cough has ceaſed, and ſhe is rapidly recovering appetite, fleſh, and ſtrength.

And here it may not be improper to remark, that people in general, and even ſome of the profeſſion, often make a very erroneous eſtimate of the relative digeſtibility of foods in particular caſes. How often is the miſerable hectic patient crammed with heavy glutinous ſlops, rich broths, and indigeſtible jellies, by which the decayed lungs are oppreſſed, and the fever exaſperated.

There ſeems often to be a kind of *faſhion* in the *diet* of invalids, as well as in their *diſeaſes*. A faſhionable phyſician invented beef-tea, and, for ſome time, beef-tea became all the faſhion. Another faſhionable Doctor having preſcribed oyſters and porter to a lady of rank, they ſuperſeded beef-tea, and became quite the ton.

With reſpect to drinks; if moderately ſtimulating foods are in many ſlow diſeaſes as indiſpenſibly neceſſary as ſtimulating medicines, it would be abſurd to reſtrain the patient from a moderate uſe of ſtimulating drink.

The choice muſt depend on its effects. Wines of all kinds turn ſour on the ſtomachs

of many invalids, and porter has been ſubſtituted with advantage; many, however, cannot bear any fermented liquors, and in this caſe, one or two table ſpoonfuls of brandy, diluted by eight or ten times the proportion of water, may be preferable, as it corrects acid fermentation.

The objection againſt the uſe of this drink, that perſons are apt gradually to increaſe the proportion of the ſpirit, until they become habitual dram-drinkers, militates equally againſt exceſs in the uſe of the fermented drinks; for it will not be denied, that there are many beer and wine ſots, as well as tiplers of brandy; the objection is to quantity rather than quality; for we know that brandy is generated by the fermentation of all ſtrong drinks, beſides what is added to wines, either to preſerve them, or for the purpoſe of adulteration; and therefore it ſeems rather to be more eligible to dilute what we know to be old ſpirit with pure water, eſpecially as we may thereby obviate many of the conſequences of imperfect or depraved digeſtion.

Candour, however, obliges me to caution invalids againſt the uſe *even of diluted ſpirits*, if their ſtomachs will bear fermented drinks; for

for though I never knew any bad effects from their uſe, yet a very eminent phyſician of this place, who has had a much longer and more extenſive experience of Bath caſes than I have had, has aſſured me that he has known ſeveral inſtances of perſons becoming ſots by the uſe of rum or brandy and water, preſcribed by their phyſicians, by gradually increaſing the proportion of the ſpirit; and that the late Dr. *Fothergill*, who was among the firſt who gave ſanction to this practice, declared, ſome time before his death, that he repented of having done ſo, from the unfortunate habit ſome perſons had acquired by it.

CHAP.

CHAP. XIV.

Regimen of Diet in Slow Diseases.

Difficulty of rendering this subject intelligible to every class of Readers—Regimen to be adapted to the nature of the Disease simple or complicated—Diseases of the first Class require a Stimulating Regimen—Exception to this Regimen in certain cases—A Hint to the Ladies—Nature of the second Class of Diseases illustrated—Examples of the difficulty of distinguishing the first and second Classes from each other—Indications of Regimen in Diseases of the second Class—Important Hint to Practitioners—Exceptions to the general Indication, from Difficulty of ascertaining the general nature of the Disease; the state of the Stomach and Bowels; habits of Life—Dr. Cadogan's Rules of Diet erroneous—State of the Vital Powers—Experimental Conviction that low Regimen is improper—Necessary distinction of slow Fevers—Remarks on the use of Bath waters—General Remark.

PROP. XIV. REGIMEN OF DIET IN SLOW DISEASES MUST BE ADAPTED TO THEIR NATURE, PROGRESS, DURATION, AND DEGREE; DUE REGARD BEING HAD TO THE STATE OF THE VITAL POWERS, THE HABITS OF LIFE, AND OTHER ESSENTIAL CIRCUMSTANCES.

§. 87. THIS proposition is very extensive, as it has a reference to a multiplicity of diseases. In a work of this kind, which is to be accommodated to the comprehension

comprehenſion of the Philoſopher, the Lady-Doctor, the Medical man, and the Invalid, it muſt be a very difficult taſk to render it intelligible to all.

Simplicity of deſcription and explanation, which would be beſt ſuited to the capacity of ordinary readers, would not be ſufficiently ſcientific to gratify the curioſity of the philoſopher, nor ſo accurate and explicit as to contribute to the information of profeſſional men. A middle courſe has therefore been taken in this and the Natural Hiſtory; and I flatter myſelf that no part of either of theſe works can be unintelligible to any perſon of cultivated underſtanding, who ſhall peruſe them with tolerable attention.

To avoid repetitions, I ſhall occaſionally refer to Volume Iſt, or the Natural Hiſtory, and the reader is requeſted to give the Natural Hiſtory a careful re-peruſal, eſpecially from page 128 to 155, and from 192 to 215,* before he enters on this chapter.

I proceed now to conſider the different parts of the propoſition in due order.

* I have already obſerved, and to avoid miſtakes, I now repeat, that when I refer to Eſſay I. or Vol. I. I mean the Natural Hiſtory;—when I refer only to particular pages or chapters of Vol. II. I mean the Medical Cautions.

§. 83.

§. 88. *The Nature of Slow Diſeaſes.* Theſe may be ſimple, or more or leſs compounded, according as the ſimple affections, of which the diſeaſe is compoſed, are few or numerous. We ſhall begin with the moſt ſimple, and proceed to the moſt complicated.

1ſt. Diſeaſe may conſiſt of one ſimple morbid affection, viz. *weakneſs* of the vital powers and circulation; and from the neceſſary dependance of all the other organs and functions on the vital organs, and circulating powers, they muſt neceſſarily partake of this weakneſs. But no part of the ſyſtem is ſo intimately connected with the vital powers as the nervous; and therefore weakneſs of the former is neceſſarily accompanied with exceſs, defect, or a depraved ſtate of ſenſibility, and correſponding affections of the muſcular powers.

This, which is the moſt ſimple morbid affection, or general diſeaſe of the two grand ſyſtems of the machine, may be underſtood from what is ſaid Vol. I. page 8, 18 to 22, 24, 28, 49, 128, 137, No. 2, 192 to 203; and from what has been remarked Vol. II. (Medical Cautions) Chap. XI. it will be evident that this morbid weakneſs of both

ſyſtems

ſyſtems is only an increaſed degree of the lax and delicate temperaments, and of the valetudinary, convaleſcent, and cachectic ſtates of the body; the ſigns of which ſee p. 302.

In this ſtate, a moderate uſe of the high ſtimulating or cordial regimen, Chap. XI, is indicated, for the purpoſe of increaſing the vigour of the vital powers, the tenſion of the relaxed nerves, and the diſcharge by inſenſible perſpiration; the moſt important of all excretions; as it is the firſt which is generally perverted in diſeaſes; and as the reſtitution of it is the moſt certain means and ſign of recovery from diſeaſe.

But though the ſtimulating and ſtrengthening regimen of diet is, in general, indicated in the diſeaſes of the firſt Claſs, there are ſome exceptions.

Nervous women are ſometimes full of blood; and hyſterical and epileptic fits proceed, in this caſe, from over-tenſion of the nerves; and as ſtimulating diet, or cordial medicines, would increaſe the evil, ſo a ſpare diet will be the moſt certain means of relief.

Palſy, as connected with great weakneſs, and even inſenſibility of the nervous ſyſtem, may be deemed a diſeaſe of the firſt Claſs, and

and therefore requires a ſtimulating regimen; but there are ſpecies of palſy in which it would be very injurious; ſuch, for example, as proceeds from apoplexy, or take place in perſons of a very full habit.

Hence it is that in theſe and various other inſtances, many dangerous miſtakes are committed by thoſe who are ignorant of medical principles; who conſequently have not a clear and comprehenſive view of all the circumſtances upon which the indications of medicine or regimen ought to be formed.

In the following inſtance, alſo, errors have frequently been committed, from an inability to diſtinguiſh the different circumſtances which may accompany the ſame diſeaſe.

Thus, if a perſon, *even* of a weak and relaxed conſtitution, were to be ſeized with a very profuſe diſcharge of blood, there would be hazard in giving wine and cordials, becauſe the ſtimulus would increaſe the diſcharge, even to the loſs of life; but ſo ſoon as the diſcharge abates or ceaſes, a gently ſtimulating and ſtrengthening diet will be the beſt means of preventing relapſe.

This hint is addreſſed to miſtreſſes of families, as the caſes juſt mentioned often come under

under their cognizance; and this remark, and what is ſaid Chap. XII. merit their ſerious attention.

2*dly*. Diſeaſe may conſiſt of various morbid affections combined, and become what we term complicated; as ſhall be explained under the next ſection.

§. 89. *The Progreſs of the Diſeaſe.* Slow diſeaſe often commences by ſuch inſenſibly ſmall changes, or deviations from health, that it is frequently formed, before the patient is apprized of his being in a bad ſtate of health.

When it appears in its ſimpleſt form of general weakneſs, its progreſs toward a more complicated diſeaſe is more or leſs ſlow according to a variety of circumſtances.

The circulation being languid in this firſt ſtage, it becomes gradually irregular; the ſecretions and excretions particularly partake of this irregularity, and various impediments or obſtructions take place in the different organs.* This change is explained, Vol. I.

* The following remarks, and thoſe of Vol. I. Eſſay I. on this ſubject, are confirmed by diſſections, and the obſervations which occur in MORGAGNI *de ſedibus et cauſis morborum per anatomen indagatis*.

page 205, No. 4; but as it is of importance that the young medical reader ſhould clearly comprehend this branch of pathology, I ſhall further illuſtrate it by a plain example.

A. A lymphatic gland of the neck is not diſcernible in health. But if more lymph be depoſited into its cellular cavity than is conveyed from it; (ſee Vol. I. page 172, 181) it neceſſarily increaſes in ſize, ſo as to be both ſeen and felt. This is the commencement of obſtruction; and it is evident, that as the blood veſſels which paſs through the enlarged gland muſt be more or leſs compreſſed, the paſſage of the blood through them muſt be interrupted; and as diſeaſed glands often acquire a ſchirrous or almoſt ſtony hardneſs, their nerves alſo muſt be ſo preſſed upon as to become inſenſible; and, by this means, the communication of the heart and brain with the blood veſſels and nerves of this gland, is more or leſs interrupted. The ſwelling of this ſingle gland, by determining the blood it could not receive, upon the next, neceſſarily produces an enlargement of others; and thus the evil is extended.

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What happens in one gland, the changes of which are obvious to the ſenſes, may and does happen to thouſands of others; and as ſecretion takes place in every organ, and indeed every point of the body; and almoſt all of them are ſupplied with nerves; it may eaſily be conceived that the obſtructions may become ſo univerſal, as at length totally to put a period to ſenſation, circulation, and life.

B. The next, and a very frequent ſtep in the progreſs of a complicated diſeaſe, is inflammation. The lymphatic gland, as happens in ſcrophula and other diſeaſes, ſometimes becomes red, painful, and more enlarged, and matter is formed which is diſcharged by an open ulcer; and it may even gangrene or mortify. Every other organ is liable to the ſame morbid changes; and in this way ſchirrus degenerates into cancer.

C. When obſtructions take place in one or more important organs, the circulation through them being impeded, the fluids, like a river dammed up, are determined in a larger proportion on the ſecretory and excretory organs; hence ſpitting of blood from tuberculous obſtructions of the lungs; dropſy from

from ſchirrous enlargement of the liver, &c. See Vol. I. §. 93, p. 203; No. 1, 2, 3.

D. Sometimes the impediment takes place in the blood veſſels, as is obvious in the ſwelling of the hæmorrhoidal veins, commonly called the *Piles*; the ſame may happen from polypus or ancuriſm in the heart and large blood veſſels; and as piles burſt when diſtended with blood, the ſame happens to the heart and large arteries, and the patient is inſtantly deprived of life.

E. It may eaſily be conceived that when all the other organs and functions of the body are ſo diſordered, that the digeſtive organs cannot remain ſound; they are therefore weakened in various ways and degrees, explained Vol. I. page 211; and what is ſaid Vol. I. page 201, will account for the loſs of fleſh and ſtrength in ſlow diſeaſes.

§. 90. *The Duration and Degrees of Slow Diſeaſes.* Having briefly traced the progreſs of a ſlow diſeaſe from ſimple weakneſs through the different ſtages of complication, it may eaſily be conceived that the increaſe of the diſeaſe muſt be in proportion to its duration; each morbid affection becoming not only more

more exaſperated; but neceſſarily, either from ſympathy, or the mutual dependance of all the organs, extending the evil to every other.

Thus, *e. g.* in the hypochondriac diſeaſe, at its commencement, weakneſs and depraved irritability of the ſtomach and bowels conſtitute the whole diſeaſe; but the circulation being impeded by repeated ſpaſmodic conſtrictions, the current of blood is determined on particular portions of thoſe organs; obſtructions take place, as in the lymphatic gland, and alſo, from the ſame cauſe in the neighbouring, and even remote organs, ſimple hypochondriaciſm is changed into melancholy or madneſs; and on diſſection of ſuch perſons, the ſtomach, liver, and meſenteric glands are not only diſcovered to be ſchirrous, but we find the evil extended alſo to the brain and its membranes, in which tumours, and even impoſthumations, have been found.

§. 91. The indication of regimen in Claſs 2d is, to avoid whatever may increaſe the determination on the obſtructed organs.

This indication is grounded on the following circumſtances.

1ſt. Whatever increaſes the force of the circulation, muſt alſo increaſe the determination or fluxion on the obſtructed organ; and not only increaſe the obſtruction, but may even produce inflammation and impoſthumation; hence it is that, when cough proceeds from indolent tubercles of the lungs, a ſtimulating diet brings on inflammation and impoſthumation of thoſe tubercles, and the patient dies conſumptive; whilſt his life might have been ſaved or prolonged by a low, ſedative, ſparing diet.

2dly. Many of thoſe complicated diſeaſes proceed from high living; and therefore it ſhould ſeem that a contrary regimen would be the beſt means of removing them.

Thus the epicure and tippler, by deſtroying the tone of his digeſtive organs, brings on paralytic weakneſs of the ſtomach; and an obſtruction or ſchirrus of his liver.

§. 92. It often happens, however, in the management of diſeaſes, that the phyſician muſt temporiſe, and, unable to do what he ought, is obliged to do what circumſtances will permit; and certain very urgent contra-indications may ariſe, which may prevent him

him from carrying his plan into execution. As this is a very important ſubject, I ſhall conſider theſe contraindications ſeparately.

1ſt. *The difficulty of diſtinguiſhing diſeaſes of the ſecond from thoſe of the firſt Claſs, from the ſimilarity of ſymptoms.* This difficulty is indeed very great; and as the ſymptoms which indicate obſtructions of the internal organs are few and equivocal, we can only gueſs that the diſeaſe belongs to the ſecond Claſs, when it obſtinately reſiſts the power of medicine and diet, and the patient daily loſes fleſh and ſtrength, under the moſt judicious treatment. The following examples will ſhew how far we may be miſtaken in forming a judgment of the nature of the diſeaſe; and conſequently the indication for regimen.

A. Head-ach, giddineſs, and other diſagreeable ſenſations of the head, may be the effects of nervous irritability, or ſympathy with the ſtomach;—or of permanent obſtructions of the brain.

B. Senſe of anxiety, conſtriction, and palpitation of the heart, may be purely nervous;—or may proceed from obſtruction, en-

largement, ancuriſm, &c. of the heart or large blood veſſels.

C. Cough, difficulty of breathing, and ſenſe of anxiety, may be either nervous, ſymptomatic, or the effect of gouty or other ſubtil acrimony, irritating thoſe organs;—or may be owing to tuberculous obſtructions of the lungs, dropſy in their cellular ſubſtance, or in the cavity of the breaſt, eſpecially in the earlier ſtages of thoſe diſeaſes.

D. Senſe of anxiety at the pit of the ſtomach, loſs of appetite, nauſea, ſenſe of conſtriction, flatulent diſtenſion, colic pains, and a variety of other uneaſy ſenſations, may be ſpaſmodic, flatulent, or gouty;—or they may proceed from ſchirrus of the ſtomach or liver, gall-ſtones, gravel, obſtructions of the meſentery, &c.

E. Convulſive diſeaſes of various kinds may be the effects of pure nervous irritability;—or they may proceed from obſtructions of the brain or other organs, producing irregularity in the diſtribution of the nervous power to the organs of ſenſation and motion.

F. Palſy from mere weakneſs, ſpaſmodic colic, or the tranſlation of gouty or rheumatic matter on the ſpinal marrow, is a very different

different diſeaſe from that which proceeds from congeſtion of blood in the veſſels, or ſerum in the cavities of the brain, tumours of that organ, or in others, compreſſing particular nerves.

G. The morbid increaſe of excretions, diſcharges of blood, or dropſical collections in the cavities of the head, breaſt, abdomen, or extremities, which proceed from mere weakneſs, are very different from thoſe which are produced by permanent obſtructions of the great organs.

H. Irregular fever is often the effect of weakneſs or irritability; but it is alſo the reſult of viſceral obſtruction.*

§. 93. From what has been ſaid under theſe few examples, it will appear how difficult it may be to diſtinguiſh the two Claſſes by their ſymptoms: here, however, the young practitioner may draw ſome uſeful information from attending to temperament, former diſeaſes, the intermiſſion or conſtancy of the ſymptoms, (they being more permanent in the ſecond than in the firſt Claſs) and the effects of regimen.

* See Vol. I, page 206, for the diſtinction.

I have already remarked, Chap. XI, that in obſcure diſeaſes, as thoſe of the ſecond Claſs, it will be more prudent for the practitioner to feel his way, by a trial of the effects of regimen, rather than fall on pell-mell with powerful remedies, before the nature of the diſeaſe is aſcertained; which will be more difficult, as thoſe of the firſt Claſs gradually glide into thoſe of the ſecond.

2dly. *The ſtate of the ſtomach and bowels.* It has been remarked that, in diſeaſes of the firſt and ſecond Claſs, the digeſtive powers are often very weak; and in this caſe, we muſt be contented to permit the patient to uſe that kind of food which, being moſt grateful to the nerves of the ſtomach, is moſt likely to be converted into good nouriſhment, without regarding how far it may, or may not, be indicated by the nature of the diſeaſe: for the patient muſt be nouriſhed, or die.

Of the neceſſity of indulging patients in the uſe of what is moſt grateful to them, I gave a ſtrong inſtance, Chap. XIII; and ſhall ſubjoin another, which fell under my obſervation two years ago.

A lady

A lady who had been many years ſubject to hypochondriacal complaints, combined with irregular gout, and, as I ſuſpected, obſtructions of ſome of the abdominal viſcera, put herſelf under my care. Her appetite was totally loſt, and her ſtomach rejected the greateſt part of the little food ſhe took to ſuſtain life; and, from habit and prejudice, ſhe totally abſtained from all ſtrong drinks. I inſiſted on her trying how far ham, ſalted tongue, and highly ſeaſoned foods, would agree with her ſtomach; and ſhe, having an inſuperable averſion to wine, was perſuaded to drink porter, and brandy or rum with water: ſhe drank the Bath waters in very ſmall quantities. By theſe means, joined with a little warm medicine, her vomiting ceaſed, her appetite returned, and ſhe left Bath in a better ſtate than ſhe had been in for ſome years. That this change did not proceed from any other circumſtance, except the change of regimen, was evident from her having drank the Bath waters for more than a month without the leaſt benefit before ſhe conſulted me. I recommended, that, as her ſtomach acquired ſtrength, ſhe ſhould gradually,

dually return to the more ſimple diet to which ſhe had been habituated.

What ſhall we ſay to Dr. *Cadogan*'s *unqualified* interdiction of all ſalted and ſmoked meats, and ſpiceries, in chronic diſeaſes? and what plan of diet would the Doctor have ſuggeſted in caſes ſimilar to this?

A judicious phyſician will no more *ſtrain at a gnat, than ſwallow a camel*; nor will he ſacrifice the life of a patient to the rigour of a general rule, though it may, on the whole, be well-founded: But, after an experience of forty years, I will venture to affirm, that if the Doctor has met with no caſes in which *he did not* recede from his general plan, his practice muſt either have been very limited, or very ſingular.

Now I am upon the ſubject of neceſſary indulgence, I conceive that the occaſional uſe of the condiments, whether pickles or ſpiceries, cannot be more objectionable than the occaſional uſe of bitters or cordials; they both anſwer a good temporary purpoſe; but that purpoſe being anſwered, they become equally unneceſſary and improper.

Such patients whoſe appetite and digeſtion are weak, take but little food at a time, and

and therefore cannot bear long faſting; yet they are unwilling to eat but at ſet meals; but this is a very improper ſelf-denial; for as the ſtomach of ſuch perſons is much diſpoſed to generate a ſharp acid, an unnatural craving is thereby excited, which ſometimes induces them to eat more than they can digeſt.*

I would not, from what I have ſaid, have it inferred that I am an advocate for high and ſtimulating diet in chronic diſeaſes; for I am convinced that a moderate and ſpare regimen is in general indicated, for reaſons already given under the indication.

3*dly*. *The habits of life*. Many of thoſe perſons who labour under chronic diſeaſes, *gout* eſpecially, are ſuch as have indulged in all the intemperance of what is very *improperly* termed *good living*, both in eating and drinking; and though they derive their ill health and broken conſtitutions from this mode of life, yet it is generally very unſafe to make a ſudden tranſition to an oppoſite regimen, though more ſuitable to the nature of their diſeaſe; for we are the children of

* See Vol. I. Eſſay I. page 211, on the faults of digeſtion.

habit,

habit, bodily and mental, and our organs will not bear being ſuddenly deprived of their wonted ſtimuli; which, however injurious in their qualities, are, by cuſtom, become natural.

Dr. *Cadogan*, therefore, erred in not pointing out with preciſion the circumſtances under which his plan was ſafe and practicable; for I have known ſeveral old gouty patients, who, having ſuddenly given up their liberal diet, were quickly obliged to revert to their wonted fare, from an alarming conviction of the danger they had incurred.*

But it was not gouty patients alone who ſuffered by adopting the Doctor's general plan; ſeveral fell under my cognizance who laboured under complaints of the ſtomach, vulgarly, but improperly, termed *bilious*. Theſe patients, from weakneſs and irritability of the ſtomach, being unable to bear the Doctor's inſipid diet, and abſtinence from ſtrong drink, loſt fleſh, ſpirits, and ſtrength, until they were adviſed to recur to a more generous diet.

* I deem it to be peculiarly my duty to controvert ſuch poſitions in Doctor *Cadogan*'s popular pamphlet, as evidently lead to important errors in regimen: ſuch of this gentleman's opinions as are merely hypothetical and ſpeculative, and there are not a few ſuch, I ſhall paſs over without animadverſion.

Others, when the idea of a gouty diſpoſition became *faſhionable*, though they had always been temperate, entered very precipitantly into the Doctor's plan, for the purpoſe of anticipating the poſſibility of being gouty; and from a tolerable, though ſomewhat delicate, ſtate of health, ſunk into an alarming ſtate of weakneſs.

4*thly*. *State of the vital powers.* The firſt indication muſt be to ſuſtain life; and it would be a vain attempt to preſcribe remedies for the cure of a diſeaſe, whilſt the powers of the conſtitution are ſo feeble, as neither to be able to bear the operation of remedies, nor give them due efficacy; and therefore, when patients are low and weak, ſuch foods and drinks as may increaſe the power of the heart will be indiſpenſibly neceſſary; and a glaſs of wine will be more likely to produce this effect, than a draught of water.

5*thly*. *An experimental conviction that low regimen will not anſwer.* Whilſt ſome medical men totally diſregard regimen, others are unneceſſarily rigid in preſcribing it; and ſince the publication of Doctor *Cadogan*'s pamphlet, the low and abſtemious regimen has become faſhionable.

When

When medical men adopt opinions from an implicit reliance on authority, inſtead of being guided by ſcientific principles and accurate analogy, they are as much more tenacious of them, as the ſuperſtitious and enthuſiaſtic are more violent zealots than the rational chriſtian.

That a rigid and unqualified adherence to any particular regimen muſt be erroneous and injurious, cannot be doubted; for even in the ſame diſeaſe, an occaſional change of regimen, as well as of medicines, may often be proper, and indeed neceſſary.

But in no reſpect have errors been ſo frequently committed as in chronic or ſlow diſeaſes accompanied with fever.

I have remarked, (ſee Vol. I. Eſſay I. page 206) that in many ſlow diſeaſes there is an irregular fever, which generally proceeds from mere weakneſs and irritability, and ſeems to be ſomewhat between a low nervous fever and an ague; and takes place more frequently in diſeaſes of Claſs I. page 338; and from an ill-judged opinion that a ſtimulating diet muſt be injurious whereſoever there is a ſemblance of fever, many have, to their great injury, perſevered in the uſe of a low diet;

and

and after having been on the point of ſinking under it, have, by exchanging it for a liberal and generous regimen, recovered perfect health: The following caſe is preciſely in point.

Some years ago I met with a Britiſh ſubject at Spa, exceedingly emaciated, and labouring under cough, groſs ſpitting, and night ſweats. He was diſſuaded from drinking thoſe chalybeate waters, on the ſuppoſition that he was in the laſt ſtage of a conſumption. In the ſucceeding autumn I met him at Bath, where he was drinking the waters, and eating and drinking ad libitum, without any regard to regimen: He however gradually loſt his cough and night ſweats, as he gained fleſh and ſtrength; and in ſix months recovered perfect health. A near relation of his, now here, tells me that he is become remarkably corpulent.*

Had

* It may not be foreign from my purpoſe to offer a general remark in this place. The Bath waters have certainly a ſtimulating power, and heat perſons who are either of a full habit, or labour under what is vulgarly termed a cold, when accompanied with inflammatory ſymptoms.

As a variety of circumſtances contribute peculiarly to ſtrangers catching cold at Bath; in this ſtate they are told, by every acquaintance they meet, that they muſt not touch the waters; and

it

Had this young gentleman perſiſted in his low diet, even *Briſtol water* would not have ſaved him; and had he ſunk under his diſeaſe, which he certainly would, had he not changed his plan, it would have been ſuppoſed by all who knew him, that he died conſumptive.

it has happened that the phyſician or apothecary, without attending to the temperament or circumſtances of the caſe, has prohibited the uſe of the waters, until the cold was removed. But as I have remarked, (Vol. I. Eſſay I. page 204, No. 2 and 4, and §. 88 of this chapter) cough, and even ſlight fever, may be effects of mere weakneſs or irritability, and therefore the uſe of the Bath waters may not only *not* be injurious, but very beneficial, by increaſing the vital powers, and promoting perſpiration, and may thereby be the moſt effectual means, joined with a generous diet, of removing both cold and cough, as I have experienced in ſeveral inſtances.

In pale, ſallow, bloated, and cachectic invalids, the little fever accompanying theſe colds is ſo far from being exaſperated by the Bath water, that as an acceſſory ſtimulus, it may aſſiſt in producing thoſe changes by which a cachectic habit approaches the inflammatory diatheſis, as a ſtep toward firm health.

It may be proper to add, that where there is ſome doubt whether the cough is of that nature which will admit of the uſe of the Bath water; no eſſential injury can accrue from a cautious trial: if it heats, produces fixed pains of the breaſt or ſide, and renders the cough more dry and harſh, it muſt be deſiſted from, and a little quiet and abſtinence will ſoon remove it; but if the practitioner has carefully peruſed Chap. XI, &c. he can rarely err in determining what caſes of this kind are or are not adapted to the uſe of the waters.

And

And here I would obſerve that, from the obſcurity of the caſe, or inattention of the practitioner, many patients are, I believe, ſent to drink Briſtol water, on a ſuppoſition of conſumptive tendency, without effect, who would have found their cure at Bath; and I have at this time a young gentleman under my care, who was ſent to Briſtol by an eminent phyſician of London, on the ſuppoſition of his being conſumptive, where, receiving no benefit, he is now recovering faſt under the uſe of the Bath waters.

The ſlow fever which accompanies ſome of the diſeaſes of the ſecond Claſs, approaches in its nature, in various degrees, nearer to that of the hectic; until it becomes abſolutely and confirmedly ſo.

When obſtructions have taken place to a conſiderable degree in important organs, as in the lungs, liver, and meſentery, they are not neceſſarily accompanied with irregular fever; but when they are, it is probable that there is ſome tendency to inflammation; and there is reaſon to ſuſpect that, in its progreſs, it may become compleatly hectic, either from increaſe of inflammation, or the formation

formation of matter in ſome part of the obſtructed organ.

Here, the effects of regimen will afford the practitioner a more certain criterion concerning the nature of the diſeaſe, than any other circumſtance.

It has been remarked, Chap. XI, that there are four degrees of regimen, the high, low, moderate, and alterative.

To determine which of thoſe is moſt ſuitable to the caſe, there are ſome circumſtances to be taken into conſideration.

1*ſt*. If the patient is of a delicate habit, has been ſubject to nervous affections, and has been in the uſe of a moderate, and ſpare diet, without any mitigation of the ſymptoms, eſpecially of the fever, it may be proper to try the effects of a more liberal and ſtimulating diet; and if this agrees, we may be aſſured that the diſeaſe is of the firſt Claſs; or that no conſiderable obſtructions have yet taken place.

2*dly*. If the patient was of a firm and athletic habit before he was ſeized with the preſent diſeaſe, and having been uſed to a liberal or high diet, ſtill continues it, and the fever and other ſymptoms of the diſeaſe are rather

rather exaſperated than alleviated by it; the diet ought to be gradually reduced, as much as the ſtrength will permit: if the fever be mitigated by this change, the fever is probably in ſome degree *hectic*; and the patient's ſafety will conſiſt in a cautious reduction of regimen in the manner propoſed in the next Chapter; until he or ſhe can bear a diet of milk and vegetables, which I term the *alterative* diet, and which is certainly the only means of cure (ſo far as depends on diet) in inveterate diſeaſes of the ſecond Claſs, as will appear more fully in the next Chapter.

3*dly*. It ſometimes happens that, from various cauſes, eſpecially in complaints of the breaſt, a ſlow hectic becomes at once highly inflammatory; in this caſe it will be neceſſary to adopt the low regimen, Chap. XII, at once, and continue it until the ſymptoms abate; and then have recourſe to the *alterative* diet, which may often be entered upon at once, as the body has been prepared for the change by the previous low regimen.

CHAP. XV.

REGIMEN OF DIET UNDER INVETERATE DISEASES.

Diſeaſes of the Third Claſs generally deemed Inveterate—Indications of Regimen in thoſe Diſeaſes—Gout not the repreſentative of all Chronic Diſeaſes—not always a Diſeaſe of Indigeſtion—every kind of Gout will not admit of the ſame Regimen—Dr. Cadogan's Error in this Inſtance—Sudden Change of Diet often hazardous, eſpecially in Gout—Plan for a gradual Change—Cautions in executing the Plan—Inſtances of Succeſs.

PROP. XV. SUCH DISEASES AS ARE BECOME INVETERATE, EITHER BY THEIR NATURE OR DURATION, REQUIRE SUCH A REGIMEN AS SHALL GRADUALLY CHANGE THE STATE OF THE BODY, SO FAR AS SHALL BE CONSISTENT WITH THE SAFETY OF THE PATIENT.

THE diſeaſes which generally come under this deſcription are, inveterate gout and rheumatiſm, ſome kinds of palſy, epilepſy, ſome ſpecies of melancholy, inſanity, aſthma, polypus of the heart or large blood-veſſels, ſchrophula,

ſcrophula, conſumptive tendency, obſtinate obſtructions of the liver, meſenteric glands, and other organs, ſchirrus of ſome conſiderable organs, cancer, leproſy, and other inveterate diſeaſes of the ſkin.

§. 94. The indications of regimen in diſeaſes of this third claſs are,

1*ſt*. To accommodate the regimen to ſuch circumſtances of the diſeaſe as ſeem to contribute to its inveteracy.

2*dly*. To impoſe the leaſt poſſible labour on the conſtitution, in the proſecution of dietetic regimen.

3*dly*. To ſuſtain the powers of life, otherwiſe neither medicine nor diet can avail.

Theſe indications have been, and will be farther explained in the courſe of the chapter; it may however be obſerved, that formerly it was deemed by practitioners to be indiſpenſibly neceſſary to put their patients upon what might be called a medicated diet; ſo that what with diet drinks, herb teas, antiſcorbutic juices, &c. the poor patient was literally ſwallowing phyſic all day long;—a moſt diſtreſsful and diſguſting occupation, founded on an idea of the neceſſity of ſweetening the blood.

§ 95. There are many diſeaſes which, being merely accidental, require only a temporary regulation of diet; and, the diſeaſe being removed, there can be no objection to the patients' returning gradually to their uſual mode of living: ſuch are, the diſeaſes of the firſt claſs, and ſuch of thoſe of the ſecond which, from the morbid affections of the organs being ſlight and recent, generally yield to a proper courſe of medicine, and a correſpondent regimen: but when a diſeaſe, either from being hereditary, inveterate in its nature, or rendered ſo by long continuance, has become, as it were, a part of the conſtitution, as the diſeaſes enumerated above, and alſo thoſe of the ſecond claſs when they become inveterate; nothing but a ſteady and unremitting attention to regimen, eſpecially of diet, can poſſibly eradicate the evil, medicine alone being ineffectual.

Before I proceed to my remarks on the regimen pointed out by the indications, I ſhall make ſome obſervations on certain poſitions laid down by Dr. *Cadogan*.

§. 96. The Doctor, conſidering gout as the repreſentative of all other chronic diſeaſes,

eaſes, *an opinion, however, to which many of his brethren will not perhaps readily accord*, aſſerts, that gout is a diſeaſe of indigeſtion; but, admitting the fact, it would be difficult to prove that many other chronic diſeaſes proceed alſo from the ſame cauſe, the contrary being in fact true; ſo that the analogy is not well founded; for in other diſeaſes, and even in gout itſelf, there are not always indications of the organs of digeſtion being at all impaired, until the diſeaſe has become inveterate, and the powers of the conſtitution are almoſt entirely exhauſted.

The Doctor, having aſſumed indigeſtion as the cauſe of gout and all other chronic diſeaſes, and having aſſerted that wine produces more diſeaſes than any other cauſe, proceeds to advance a poſition which, *in general*, will be granted him, that to attempt to cure a diſeaſe proceeding from intemperance by any other means than by avoiding the cauſe, would be as abſurd as to take a medicine to prevent a broken leg.

I am inclined, however, to believe that an intemperate uſe of ſtrong drink is not ſo frequent a cauſe of gout as is generally ſuppoſed; for ſoldiers, ſailors, porters, &c. are,

in general, intemperate, and yet very few of that rank in life are gouty; and with reſpect to wine, which the Doctor condemns ſo peremptorily, gout is not ſo frequent in wine countries as in this; and though gout formed a part of that complicated diſeaſe under which *Cornaro* laboured, he continued to drink wine, eſpecially that of the new vintage. But gout ſeems to have formed a very trivial part of his diſeaſe, and reſiding moreover in a warm climate, favourable to equal perſpiration, there was leſs neceſſity for a very rigid regimen.

I am not, however, an advocate for the uſe of wine or other fermented liquors in gout, as will appear hereafter; I beg leave, however, to remark, that the Doctor's opinion, that we had better take the whole quantity of wine once a week, than in daily divided portions, contradicts both analogy and experience.

A phyſician of experience muſt be ſurpriſed that the Doctor ſhould never have met with patients labouring under gout, whoſe diſeaſe was either totally incurable, or whoſe conſtitutions could not, without extreme hazard, admit of his regimen.

If

If he has not met with ſuch patients, his practice muſt have been very limited; if he has, he ought to have declared ſuch caſes to be exceptions to his general rule of regimen, as he would thereby have ſaved many gouty patients the mortification of relinquiſhing their wine and roaſt beef, without any adequate advantage; often indeed to their great detriment.

§. 97. Were it even to be admitted that gout and other ſlow diſeaſes are effects of indigeſtion, the Doctor's *ſudden* tranſition from one extreme to another, would not be the proper means of reſtoring the tone of the enervated ſtomach and bowels, though in all caſes where the conſtitution will bear it, I am convinced that a *gradual* leſſening of the quantity of ſtrong drinks and animal foods, and a proportionable increaſe of milk and vegetables, until the patient can bear ſuch a diet ſolely, ought to be tried in every inveterate diſeaſe; for though many conſtitutions may not bear a *total* change, yet *even a partial reduction* may prolong life, and render the remainder of it more comfortable, by a mitigation of ſome of the moſt urgent ſymptoms.

The

The period when ſuch a total change of diet is likely to ſucceed, is whilſt the organs of digeſtion remain tolerably vigorous, which they continue to be in many patients long after the commencement of gout.

§. 98. Dr. *Cadogan* does not admit of milk as an article of his regimen, on the ſuppoſition of its being enervating and relaxing.

The Doctor's opinion is, however, flatly contradicted by experience; but there is a more cogent objection to milk as a part of the diet of invalids, that it ſits very uneaſily on the ſtomach of many perſons; but where it does not, it is certainly preferable to the Doctor's ſodden tripe.

It is undeniably true, that a milk and vegetable diet has done much in mitigating the violence of, or totally ſuſpending, inveterate diſeaſes, eſpecially if hereditary. I have known ſeveral inſtances of a ſtrong conſumptive tendency, eſpecially when accompanied by ſpitting of blood, being ſuſpended by a total abſtinence from animal food and ſtrong drink; and the reaſon why this expedient does not ſucceed more frequently is, that it is adopted too late; that is, when the lungs are irreparably diſeaſed.

§. 99. The *gout*, notwithſtanding the many infallible noſtrums which are advertiſed and recommended by ignorant quacks, has not, I believe, yielded, when inveterate, to any means but an entire change of diet; and in confirmation of this opinion, my gouty readers may be amuſed, *perhaps informed*, by the following caſes.

Near twenty years ago, upon viſiting a patient of mine; a ruddy, and apparently robuſt, old man dined with him. I remarked, that he ate nothing but pudding, and drank water. Curioſity led me to enquire into his motives for adopting this regimen. He told me, that when he was a young man, he drank hard, and being very quarrelſome in his cups, he came to a reſolution of abſtaining from ſtrong drink; and being ſubject to ſevere attacks of the gout, he ſome years after determined to compleat his regimen, and refrain from animal food. From that time he had been entirely free from gout, and was then 70 years of age, and in perfect health: I told him, that having been fifteen years free from gout, and being at an advanced age, I believed he could not be eſſentially injured by a gradual return to the uſe of animal food and

ſtrong

ſtrong drink. He made the experiment, and as he reſided in a neighbouring county, I had no opportunity of ſeeing him afterwards, but he deſired a friend of his to inform me, that he had not changed his regimen above ſix weeks, before he had a ſlight fit of gout. As I left that county a ſhort time after, I did not learn whether he had any more fits of gout, or had again changed his plan in favour of meagre diet.

An attorney at law, one of the moſt bulky men I ever ſaw, had, by intemperance, incurred gout to ſuch a degree as to be confined ſeveral months in the year, and was almoſt a cripple. The gentleman whom I ſucceeded at Guildford, now an eminent phyſician in London,* being conſulted by him, adviſed him to enter on a milk and vegetable diet: this plan ſucceeded ſo far, that he not only loſt his gout, but recovered the uſe of his limbs; and when I ſaw him, he had loſt a conſiderable part of his unweildy corpulency, and was very active.

A man of the profeſſion, who drank very hard, was induced, by the ſeverity of the gout, to adopt the ſame regimen. The

* Dr. Reynolds.

change

change produced very happy effects; but being a violent partizan for a candidate at a county election, he relapſed into his former intemperance, the gout returned, and at length degenerated into an incurable palſy of one ſide.

In all the caſes enumerated above, the patients were men of good conſtitutions; and two of them having commenced their ſparing plan of diet when labouring under an inflammatory fit of the gout, the ſymptomatic fever prevented any ill effects which might be expected from the low diet; and before the fit was compleatly terminated, the patients became habituated to it, and perſiſted in it with impunity.

And here a moſt eſſential cirumſtance merits the attention of the gouty patient, which is the preciſe period when a reduction of diet ought to commence, and this ſhould be regulated by the nature and degree of the diſeaſe. It has juſt been remarked, that in an inflammatory fit, during which the ſymptomatic fever depoſited the matter rapidly and compleatly on the joints, as was evident from the redneſs, ſwelling, and pain, the reduction of diet was very judiciouſly commenced,

menced, becauſe there was little or no hazard of the matter falling back on the conſtitution; and I have known ſeveral patients who, from the commencement of the fit, totally abſtained from all animal food and ſtrong drink until the end of it; and had ſuch patients perſevered in the uſe of the low diet, it is not to be doubted but they would have totally annihilated the diſeaſe.

§. 100. But when the conſtitutional vigour is conſiderably broken, the digeſtive organs weakened, the joints diſeaſed, the gout become irregular, and the fits tardy and incompleat, it would be very improper to begin the reducing plan during the fit, as the vital powers ought, at that period, to be rather ſupported by a generous diet. The celebrated Dr. *Sydenham* was almoſt deſtroyed by attempting a ſudden change of diet, probably under the circumſtances to which I now allude.

In men advanced in life, whoſe fits of gout are tardy, and therefore neither inflammatory, painful, nor ſteady, it may be prudent to begin the experiment in the interval, by daily and very gradually ſubtracting a very

very ſmall portion of their animal food and wine. But ſhould wandering gouty pains, ſymptoms of indigeſtion, or conſiderable depreſſion of ſtrength and ſpirits, ſhew that the vital and digeſtive powers are too weak to bear the change of diet, it will be prudent to increaſe the proportion of animal food and wine a little for a few days, until thoſe ſymptoms wear off, when it may be right to make another trial of the reducing plan, but with extreme caution; and in this way, if the patient cannot bear an entire change of diet, he will nevertheleſs experience the benefit of that reduction which he can bear without hazard.

I am however convinced, that if gouty perſons will have reſolution to adopt this plan, before the conſtitution is totally worn out, there can be no danger in attempting a *gradual reduction*, until the health is reſtored by a milk and vegetable regimen; in which it will be prudent to perſiſt as long as the conſtitution will bear it: for the firſt caſe ſhews that a return to a more liberal diet will probably hazard a return of gout.

§. 101. The reaſon why a cautious reduction of diet is neceſſary in gouty patients, ſeems

ſeems to be, that when the vital powers are too ſuddenly weakened, the gouty matter, floating in the habit, inſtead of being depoſited on the extremities, is apt to fix on ſome of the principal organs; and may thereby become ſpeedily fatal.

When gouty or other patients are induced, by the ſeverity of their ſufferings, to engage reſolutely in the uſe of the alterative plan, the following hints may be of uſe.

1*ſt*. When there is a tolerable ſhare of conſtitutional vigour, the appetite and digeſtion not much impaired, and the patient has not been much addicted to high diſhes or ſtrong drinks; he muſt, at the commencement of his courſe, confine himſelf to the uſe of one plain diſh of ſolid animal food, with no other ſauce or ſeaſoning except ſalt and a little muſtard; and a variety of vegetables; and may proceed in his change in the following manner:

Firſt and ſecond week, breakfaſt, coffee or chocolate, gradually increaſing the proportion of milk in either, and deſiſting from butter: about an hour before dinner, a baſon of plain ſoup; at dinner, a moderate portion of one diſh of ſolid animal food of any kind,

roaſted

roaſted or boiled, with vegetables; plain ſoup for ſupper.

Third and fourth week, every other day ſoup only and plain pudding, milk for breakfaſt and ſupper.

Fifth and ſixth week, ſoup and pudding two days ſucceſſively, the intervening day boiled meat.

Seventh week, ſoup one day for dinner, pudding another; milk about an hour before the pudding dinner, ſoup for ſupper on the pudding day; ſolid animal food to be now given up entirely.

Eighth week, the milk, pudding and vegetable diet may be totally adopted.

With reſpect to wine, or other ſtrong drink; by a gradual leſſening of the quantity daily, the whole may be left off in the courſe of eight weeks.

2*dly*. When a gouty patient is not conſiderably reduced in point of ſtrength, if his appetite be tolerably good, but his digeſtion weak; and he has been in the habit of living high, whilſt his fits of gout are ſtill tolerably regular, compleat, and inflammatory; the reduction of regimen ought to be begun as ſoon as the fit is well formed, for reaſons aſſigned

aſſigned above; and the reduction is to be made more or leſs gradually on the preceding plan, as the patient can bear it.

3*dly*. If the patient has either no regular fit of gout, or that very little, if at all, inflammatory and fixed; but the gouty matter falls frequently on the internal organs; and the ſtrength, appetite, and digeſtion, are very much impaired; in this caſe, very little is to be hoped from a conſiderable change; though a partial one may be attempted under the reſtrictions and cautions already mentioned.

§. 102. There are, however, two diſeaſes, that will, from their nature, and urgency, demand a ſudden tranſition to the *low* regimen indicated Chap. XIII; viz. conſiderable ſpitting of blood with or without fever; or cough with hectic fever; and if they do not yield to this change, a trial of, and perſeverance in, the *alterative* plan, may be the beſt means of mitigating the ſymptoms, and protracting the life of the patient.

§. 103. With reſpect to the other inveterate diſeaſes enumerated in the beginning of this Chapter; there will not be ſo much riſque

riſque in attempting the alterative plan, as in gout; but it will be more prudent to do it gradually.

A low and ſpare diet has been preſcribed with advantage in ſome ſpecies of obſtinate chronic rheumatiſm; and if I recollect aright, the celebrated Dr. *Boerhaave* lived for ſome weeks ſolely on whey, when labouring under that diſeaſe. Abſtinence from animal food and ſtrong drink has ſometimes been of uſe in epilepſy; and in one caſe of inveterate aſthma, and a ſingle caſe of enlarged liver, where the other bowels were ſuppoſed to be diſeaſed, the diet I have recommended not only prolonged life beyond what might have been expected, but rendered it much more comfortable: and I am convinced, that in ſuch deplorable caſes, ſuch a diet is the *dernier reſort*, when all medicines fail. But few will be found who have reſolution ſufficient to perſevere.

Milk, which conſtitutes the chief part of food on this reduced plan, rarely ſits eaſy on the ſtomach at firſt; but ſmall doſes of magneſia, colombo, ipecacuanha, or ley of tartar, will at length effect the purpoſe of rendering

it digeſtible, by ſtrengthening the ſtomach, and correcting acidity.

Whey and butter-milk are, I believe, in many inſtances, preferable to milk, as an article of diet on this plan. I knew one patient, on the Continent of America, who was cured of a moſt inveterate leproſy by ſuch a diet; and I have been informed of an inſtance of ſcrophula being cured by a courſe of whey; and a low diet has abated the violence, and retarded the progreſs, of ſchirrous and cancerous tumours.

My readers may expect I ſhould aſſign ſome reaſons why the diet now recommended will probably be effectual in the diſeaſes enumerated in the beginning of this Chapter; eſpecially as the inſtances are heretofore too few to afford certain hope of ſucceſs: ſome remarks made Chap. IX. page 283, &c. will aſſiſt in explaining this; and the following obſervations are more preciſely in point.

When gout is acquired, it is moſt commonly produced by luxurious exceſs in the uſe of animal foods and ſtrong drinks, by which the conſtitution is overcharged, and every organ and function overſtrained by extraordinary exertions to digeſt, circulate, diſpenſe,

diſpenſe, and finally diſcharge the ſuper-abundant and crude humours: a diet therefore of a directly oppoſite nature, long and aſſiduouſly perſiſted in, will be moſt likely to eradicate the evil, provided there be ſufficient ſtrength of conſtitution left to reſtore the organs to their former vigour.

As many obſtinate nervous diſeaſes, complicated with the obſtructions mentioned Claſs II, proceed alſo from luxurious exceſs; a ſimilar diet muſt afford the moſt certain means of relief.

When obſtinate chronic diſeaſes ariſe from, or are connected with, obſtruction and enlargement of glands, or of ſome of the moſt important organs, as is frequently the caſe; the only hope of relief muſt be from that kind of diet which has the leaſt poſſible tendency to increaſe the obſtructions, whilſt, being now freed from preternatural ſtimulus, the diſeaſed organs may, if their texture be not irretrievably ſpoiled, reſtore themſelves to their priſtine ſtate.

With reſpect to thoſe inveterate diſeaſes in which the ſuperficial glands are much diſeaſed; as in ſcrophula, ſurfeits, as they are called, land ſcurvy, and different ſpecies of

leprous eruptions, it is probable that the beneficial change takes place rather in the ſecretory organs, than in the whole maſs of blood; for, as I remarked before, the idea of diſeaſes being generally produced by ſome fault of the circulating maſs, is frequently the reſult of a falſe theory, and often ſuggeſts an erroneous or frivolous practice.

With reſpect to hereditary diſeaſes, until we can determine in what part of the ſyſtem, and whether in the ſolids or fluids, the taint reſides, we ſhall not be able to account how it is diminiſhed or extinguiſhed by a ſuitable diet; it is ſufficient to know the fact; and though the evil is, in theſe caſes, ſeldom totally eradicated, yet we certainly gain a great point, if we can retard its progreſs.

To conclude: Though medicines may certainly be very uſeful in diſeaſes of an inveterate nature; yet I believe the inſtances of their effecting a compleat cure, without a correſponding diet, are very rare, notwithſtanding the preſumptuous boaſtings, and vain promiſes, of *charlatans* and *quacks*.

BOOK II.——CHAP. I.

Choice of Habitation, or Occasional Residence.

Circumſtances neceſſary for the Choice of a healthy Habitation—Opinion of Hippocrates—*Cities unfavourable to Health—Signs of unhealthy Situation—Winter Retreats moſt favourable to Invalids.*

PROP. XVI. The choice of habitation is to be regulated by the salubrity of the air, the dryness of the soil, the security against the influence of chilling winds, and the purity of the water.

HAVING treated very fully of regimen of diet, I proceed now to offer a few obſervations on regimen, with reſpect to the other non-naturals; but they will be better underſtood after a re-peruſal of Eſſay V. book I. chap. I. page 139.

§. 104. The great *Hippocrates*, and every phyſician ſince his time, have conſidered choice of habitation as a very eſſential circumſtance toward the prevention or cure of diſeaſes.

If a man of fortune intended to build a manſion, it would be prudent to conſult a phyſician concerning its air, ſoil, aſpect, and the water he muſt uſe. But it would be foreign to my purpoſe to enter on the ſubject of ſcite on ſo extenſive a plan; as I intend only to offer a few hints to invalids.

A houſe ſituated at a diſtance from large cities, burying grounds, mines, or large manufactures, and built on a gentle declivity, in a gravelly ſoil, with a ſouthern aſpect, ſheltered from the north and eaſt winds, and in the neighbourhood of the ſea, would be the moſt eligible. The apartments ought to be ſpacious and lofty, eſpecially the bed-chambers; and the caſements ſo conſtructed as to permit the upper ſaſhes to be lowered to ſuch a degree, as to promote a conſtant ventilation: ſtoves, as improved by the ingenious Mr. *Sharpe* of London, are, for reaſons already aſſigned, preferable to common grates.

There

There are ſeveral circumſtances which ſhew that the air of a houſe is unhealthy; ſuch are, dampneſs of the walls, rotting of the furniture, ruſting of braſs and iron, mouldineſs of bread, and melting of ſugar. As we cannot always change our habitations, this impurity of the air ought to be corrected by large fires, and frequent ventilation.

The water employed for drinking, and the uſe of the kitchen, ought to be clear, without ſmell or taſte, and ſuch as readily breaks ſoap.

Thick woods, or ſtagnant waters, whether ponds or marſhes, are generally deemed unwholeſome when near a manſion; and the adjoining roads ought to be ſafe and commodious for the purpoſe of exerciſe.

§. 105. Cities are extremely unfavourable to health and long life, inſomuch that of near 800,000 perſons who died in London in the ſpace of 30 years, only 242 perſons ſurvived the 100th year; and all the inſtances of longevity collected by the ingenious Dr. *Fothergill*, a phyſician of Bath, have been taken from country villages.

The

The following is the proportion of deaths in ſeveral parts of Europe:

In Vienna, 1 in 19 of the whole inhabitants die yearly.
London, 1 in $20\frac{3}{4}$
Berlin, 1 in $26\frac{1}{2}$
Northampton, 1 in 34
The Pais du Vaud, 1 in 45.

Here we ſee, that the mortality in Vienna and London is more than doubly greater than in the Pais du Vaud.

§. 106. As this climate is, perhaps, the moſt unſteady of any in Europe, it would be proper that wealthy invalids, the conſumptive eſpecially, ſhould retire to a ſouthern part of the continent, as Nice, Naples, or Liſbon, or to the iſland of Madeira, and there reſide from the month of September or October to the middle of May, accompanied by a ſkilful, humane, and chearful Engliſh phyſician, whoſe advice ought to be ſolely relied on, and implicitly complied with: for it is moſt certain that the phyſicians on the Continent are a century behind us in medical knowledge; thoſe of France, Spain, and Portugal, eſpecially.

The journey, and the diverſity of objects, may contribute to amuſe the mind; for with reſpect

reſpect to the accommodation of invalids, no country I have viſited is in any reſpect to be compared with this.

But as many invalids are unable to incur the expence of ſuch excurſions, there is no other alternative, if their circumſtances will permit, than to change their reſidence in this country according to the changes of ſeaſon, which muſt be left to the judgment of their phyſician.

The weſt coaſt of this kingdom, eſpecially of Devonſhire, has lately been deemed to be a very proper retreat, during winter, for perſons of infirm health; and has, I am told, been preferred to any of the places recommended above: but to this opinion I cannot by any means aſſent, experimentally convinced as I am of the contrary. Of all the climates for invalids, I do, from experience, recommend Madeira; and if the patient chuſes to take a longer voyage, North or South Carolina; the latter during the winter particularly.

Some conſumptive perſons, and gouty patients, have found conſiderable advantage from reſiding in ſome of our Weſt-India iſlands. The air on the coaſt of Devonſhire

and

and Cornwall is undoubtedly ſoft, but the accommodation is bad, the lodging-houſes being generally little more than mere cottages; the roads are moreover bad; and the frequent falls of rain in low ſituations near the ſea, in this climate, are not favourable to invalids. There is, I apprehend, another objection, which is, that the ebb tides leave a very conſiderable portion of mud, from which there ariſe very copious exhalations, which are, in calm weather, very offenſive to the ſmell, and, there is reaſon to believe, not ſalutary.

CHAP.

CHAP. II.

CLOATHING.

Analogy between Cloathing, and the high or low, the ſtimulating or ſedative, Regimen—Brutes have various Defences againſt Inclemency of Weather—Luxury enervates the Body by diſpoſing us to cloath too warmly—Degrees of Cloathing to be adapted to different Ages—Climates—Habits of Life—State of Health—Cloathing for healthy Perſons—for Invalids and Sick Perſons—Bed warming to whom injurious—Stays why injurious to Females—Males who wear them to be deemed of the Neuter Gender.

PROP. XVII. CLOATHING OUGHT TO BE ACCOMMODATED TO DIFFERENT AGES, HABITS OF LIFE, CLIMATE, SEASON, AND STATE OF HEALTH.

§. 107. THE degrees of cloathing may be conſidered as having ſome analogy with the high and low, or the hot and cold, regimen; as thick clothing or covering acts as a ſtimulus, and thin cloathing as a ſedative.

Particular

Particular kinds of cloathing are more or leſs warm according to their qualities, as being more or leſs conductors of the electric fluid; or according to their colours; as diſpoſed to refract and abſorb, or reflect and throw off, the rays of light.

§. 108. As nature has provided all other animals with various defences of hair, wool, feathers, or ſcales, by which they may reſiſt the noxious impreſſions of different elements; ſo inſtinct has dictated to man, even in his ſavage ſtate, the neceſſity of covering, in proportion to the inclemency of countries and ſeaſons.

In civilized ſocieties, the improvement of arts, the facility with which men are ſupplied with the conveniences and luxuries of life, and the gratification which theſe afford, have diſpoſed mankind to be perhaps too ſolicitous about guarding againſt the inclemency of ſeaſons; and hence it is that our bodies being rendered more tender and delicate, and our feelings more acute, we find, that in proportion to the increaſe of luxury, we become leſs hardy; as being more obnoxious to the influence and impreſſion of manifold cauſes of diſeaſe.

As a phyſician cannot, any more than a legiſlator, always effect a proper change in the national manners and morals, it is incumbent on both to eſtabliſh ſuch regulations as the habits of the people will admit of.

It is very much to be regretted, that luxury has in ſome degree extended its influence to all ranks of the community; by which the bodies of the moſt uſeful members of it, the middling and lower ranks, are more enervated than thoſe of their anceſtors.

§. 109. With reſpect to the different periods of life, children ſhould, from their birth, be habituated to light cloathing, not only by day, but in bed; for nothing contributes more to form the conſtitution: infants and children are leſs apt to have their perſpiration checked, than perſons who are more advanced in life; and therefore leſs apt to catch cold. From the ſtage of childhood to the 35th year, the ſtrength of the vital powers, and a briſk circulation, tend very much to keep up an equal perſpiration; but after that period, the force of the circulation being leſſened, the cloathing by day, and the covering by night, ſhould be gradually increaſed;

creaſed; for many of the diſeaſes of advanced life are produced, or exaſperated, by obſtructed perſpiration.

§. 110. *Climate*, and *Seaſon of the Year*, ought certainly to have cloathing ſuited to them; but in our unſteady climate it is very difficult to accommodate them to the ſudden changes. Upon the whole, however, after the age of 35, it may be better to exceed, rather than be deficient, in cloathing.

§. 111. *Habit*, or *Cuſtom*, always merits great attention. If perſons have been accuſtomed to warm cloathing, there will always be hazard in ſudden changes of any kind. Thoſe who cloath, and ſleep warmly, ought not to indulge in hot cloſe rooms during the day, or have fires in their bed-chambers. Thoſe who have reſided long in hot climates, when they come into this, ſhould rather exceed in their cloathing.

§. 112. With reſpect to *the ſtate of health*; to perſons of hale conſtitutions, and in high health, very warm cloathing in the day, or covering at night, would be very improper; becauſe

becauſe their vital powers being ſtrong, and the circulation vigorous, the warmth and ſteady perſpiration on the ſurface and extremities reſiſt the impreſſions of cold or moiſture, unleſs they are very violent.

Such perſons, however, relying too much on the ſtrength of their conſtitutions, often expoſe themſelves imprudently; and as the violence of their diſeaſes is generally in proportion to the vigour of their vital powers; ſo they are frequently rapid in their progreſs, and fatal in their termination.

The grand rule is, ſo to regulate our cloathing and covering, that, when we expoſe ourſelves to the external air, the difference of the temperature of the air in both ſituations ſhall be ſuch, that we ſhall not be ſuſceptible of dangerous impreſſions under any inclemency of ſeaſon when we go abroad.

Perſons in firm health ought therefore ſo to regulate the temperature within doors, as that it ſhall not exceed fifty-ſix degrees of the thermometer in the winter, ſpring, and autumn; and in the ſummer, bring it as near to that as poſſible, by the admiſſion of freſh air.

§. 113. But

§. 113. But the chief intention of this eſſay is, to offer hints to the *delicate* and *invalid* part of my readers.

Were it happily in our option to attain all the requiſites for forming a firm conſtitution, no man of common ſenſe would ſpare any pains to acquire them: but this is not always in our power. A weakneſs of conſtitution is often hereditary; or it may reſult from diſeaſes, either unavoidable, or the effects of negligence or inattention.

Under ſuch circumſtances, we muſt be content to accommodate ourſelves to our ſituation, and prudently avoid all ſuch extremes as may impair health.

Perſons of delicate and irritable conſtitutions, whoſe vital powers are weak, and circulation languid and unſteady, are very apt to have the perſpiration checked by very ſlight cauſes: This alſo happens to invalids, whoſe complaints are thereby much exaſperated. Until the conſtitution, therefore, has been ſtrengthened, and as it were hardened, by being gradually habituated to air and exerciſe, they ought rather to exceed than be deficient in the quantity of cloathing.

§. 114. With

§. 114. With reſpect to cloathing, ſuch addition ought to be made to it, in cold and damp weather, as to protect the body againſt the ſudden and ſevere impreſſions of either.—That great philoſopher, and good man, Mr. *Boyle*, had cloaks accommodated to different ſeaſons and changes of weather; and invalids ought rather to exceed than be deficient in the warmth of their cloathing, thoſe eſpecially who are ſubject to catarrhal coughs, thoſe whoſe nerves are weak and irritable, and thoſe who are gouty and rheumatic.

Such perſons ought in the beginning of September to wear a flannel waiſtcoat over the ſhirt or ſhift, and, towards the end of October, next the body; taking care to defend the lower limbs by flannel petticoats, or woollen drawers, and ſtockings.

Such perſons as wear flannel next the body are apprehenſive of changing this part of their cloathing, leſt they catch cold, and therefore continue to wear the ſame garment through the winter; and as the warm weather comes on, cut it away by degrees. But this precaution is not only unneceſſary, but to perſons of delicacy muſt be offenſive, and indeed injurious; as thereby a part of the

perſpirable matter, accumulated for months, is retained in conſtant contact with the ſurface of the body.

I can however aver, from long perſonal experience, that the under waiſtcoat may be ſafely changed once or twice a week; and as the weather becomes more mild, it may be worn over the linen, and at length totally left off till the ſubſequent autumn.

But as, in this unſteady climate, a ſultry day in ſummer is often ſucceeded by one or more that are cold and raw, delicate perſons, who labour under complaints of the breaſt or bowels, or are ſubject to gout or rheumatiſm, ought, as often as ſuch changes take place, to make an addition to their cloathing, ſo long as is neceſſary.

I cannot quit this ſubject without obſerving, that the application of a double, treble, or even quadruple piece of flannel upon the breaſt in coughs, the belly in colics, diarrhœas, &c. and to any of the limbs affected by rheumatiſm, affords a degree of relief beyond what might be expected; eſpecially if it be ſprinkled with a little lavender water or ſoap liniment, and a moderately hot ſmoothing iron be run over it repeatedly. The pow-

erful

erful determination made by this means from the affected organ is, perhaps, greater than that of a blifter; and certainly more permanent, as the means may be applied very frequently. The idea of benefit from repeated dyings of the flannel, is abfurd.

§. 115. I hope my fair readers, if any fuch there be, will pardon me for animadverting on an article of their cloathing, which I have long confidered as extremely prejudicial, efpecially to the younger part of the fex: I mean the *ftays*. For though the prevailing *faſhion* has allowed them a little more latitude than formerly, this part of their dreſs is ſtill too ſtrait and tight, eſpecially for invalids; many of whoſe complaints are probably produced, but all exaſperated, by this coat (not of mail, but) of whalebone. However, as from cuſtom they require ſome ſupport to their cheſt, I would recommend ſtiffened jackets, or the old boddice, in lieu of ſtays; and in cold weather, they may be lined with thick flannel.

I am, however, apprehenſive, that this admonition, important as it is, will not make a proper impreſſion on the ladies. To a fine

woman, as with an ambitious man, it is not living, but *reigning*, is the object.

It has, of late, been ſuſpected that ſome young men, that they might become more compleatly effeminate, wear ſtays: It is to be hoped that the ladies will not deem them to be either males or females, but of the neuter gender.

§. 116. The feet ought to be well defended with thick ſhoes.

§. 117. As cleanlineſs contributes much to health, invalids ought to bathe their feet and legs once a week in warm water; and when it can be conveniently done, uſe a moderately warm bath once a month.

§. 118. With reſpect to covering whilſt in bed, much will depend on habit. The head ought to be peculiarly well covered whilſt we are in bed, becauſe colds and rheums are thereby prevented; and it is remarked, that as foreigners are more attentive to this circumſtance than we are, they are leſs ſubject to coughs, and their teeth are in general more ſound.

People

People in health ought never to have their beds warmed; not only becauſe the fumes of the coals are in ſome degree noxious, but becauſe warmth thus applied enervates the body. To avoid the diſagreeable impreſſion of a cold bed, Dr. *Franklin* judiciouſly recommends a cold air bath, by ſtanding naked in the cold for a minute or two before we go into bed, and rubbing the body during that time ſtrongly with a fleſh bruſh; and I will add, that a ſimilar expoſure in a morning, whilſt the whole body is again well rubbed by the fleſh bruſh, would be of great uſe.

But ſuch expedients ought to be very cautiouſly adopted by invalids.

With reſpect to them, airing the ſheets every night before the fire, ſo as to evaporate the perſpiration they may have abſorbed the preceding night, may be of uſe; and is a ſalutary ſubſtitute for bed-warming.

If, however, invalids and ſick perſons cannot from cuſtom diſpenſe with bed warming, one or two quarts of ſand, made red hot in an iron pot, and put into the warming pan, will be void of all offenſive ſmell; a circumſtance of great conſequence to perſons who have weak lungs, or very irritable nerves.

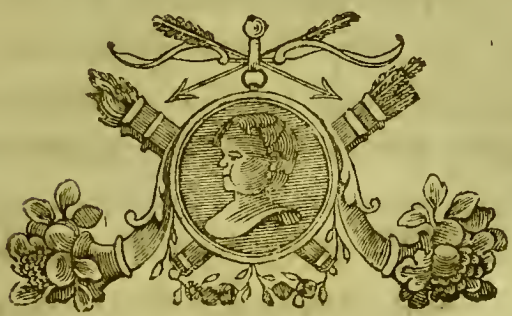
§. 119. Though

§. 119. Though a very eminent phyſician ſeems to conſider damp rooms and cloaths as ſeldom or never productive of any bad effects; yet the many inſtances of dangerous and fatal conſequences from damp linen and ſheets, to the moſt healthy, ought to make invalids, eſpecially, very careful in thoſe points.

With reſpect to the quantity of bed-cloaths, it ought to be ſuch as may, in a reaſonable time after we are in bed, promote an equal but inſenſible perſpiration; and if on awaking, at any time in the night, we find ourſelves ſo much heated as to be obliged to throw a part of them off, we may be aſſured that the quantity is too great: it will be right to cover the legs more warmly than the upper parts of the body, as the circulation in the extremities is more languid, and the warmth of thoſe parts neceſſarily leſs: and as invalids rarely fall aſleep until there is a gentle perſpiration on the extremities, it will be right to procure that as ſoon as poſſible. Gouty and rheumatic patients ſometimes find advantage from wearing worſted gauze ſtockings, or flannel ſocks, in bed, during cold weather.

I need

I need not repeat what I have already ſaid on the benefits which muſt accrue from ſleeping in a large and well-aired chamber. When there is a conſtant circulation of freſh air, we are much leſs incommoded by heavy bed-cloaths.



CHAP. III.

Exercise and Rest.

Man deſtined to Labour—Exerciſe neceſſary to Health—it promotes the internal Exerciſe of the Functions, and contributes to Longevity—Effects of moderate Exerciſe—of violent Exerciſe—Reſt why neceſſary after Exerciſe—Exerciſe active—paſſive—how accommodated to different Circumſtances—its Uſe to Invalids and ſick Perſons—Remarks on Cold Bathing.

PROP. XVIII. Exercise of the body should be accommodated to the circumstances of age, temperament, custom, and the state of health.

§. 120. TO preſerve a due relation between the different parts of regimen, it may be remarked, that exerciſe is analogous to the high or ſtimulating regimen, and reſt to the low or ſedative regimen of diet.

§. 121. As the greateſt part of every community is reduced to the neceſſity of earning

earning daily bread by the ſweat of the brow; ſo it is evident that man was deſtined to labour. The few, however, who by affluence are exempted from the neceſſity of daily labour, as the means of ſubſiſtence, cannot long enjoy firm health, without the uſe of muſcular exerciſe.

I have ſhewn (Eſſay I.) that all the motions of our organs, excited by their natural ſtimuli, may be conſidered as ſo many degrees of involuntary exerciſe; and daily experience proves, that voluntary exerciſe contributes very much to ſupport a vigorous and ſteady exertion of the internal functions; as is evident from the cheerfulneſs and alacrity with which children exerciſe themſelves for many hours at a time; and from its being an acknowledged fact, that the very ſmall proportion of mankind who have attained very old age, have been reduced to the neceſſity of labouring for their daily bread.

§. 122. Exerciſe, in a moderate degree, promotes the circulation of the blood, invigorates the nervous ſyſtem, gives firmneſs and elaſticity to the muſcular fibres, and vigour and pliancy to the limbs, promotes digeſtion

digeſtion in all its ſtages, and alſo the due diſtribution of nouriſhment, and the finer excretions, eſpecially perſpiration.

§. 123. Exerciſe, when violent or too long continued, renders the circulation unequal and tumultuous, weakens the nervous ſyſtem and the ſprings of life, exhauſts muſcular ſtrength, diſturbs and leſſens inſenſible perſpiration, and, by promoting ſweat, an unnatural and weakening evacuation, waſtes the body, by diſcharging many of the nutritious parts of our ſolids and fluids: hence very laborious perſons die of a premature old age. (See Eſſay I. chap. ii. page 25.)

§. 124. From what has been ſaid §. 123, it is evident that ſome intervals of quiet and reſt are neceſſary to reſtore the muſcles when fatigued by exerciſe, and recruit the conſtitutional waſte thereby incurred.

But theſe intervals of reſt ſhould only be ſuch as to afford relief from fatigue; and, therefore, not a day ſhould be allowed to paſs, without a degree of exerciſe accommodated to the ſtrength. Few perſons can long enjoy firm health, under a habit of indolence;

dolence; and it is peculiarly injurious to invalids; as, like sleep in excess, it contributes to increase that languor of the animal, vital, and natural functions, which constitutes a very considerable part of every disease.

§. 125. Exercise may be divided into active and passive.

The *active* exercises are—walking, riding, dancing, the chamber-horse, swinging of leads, the dumb-bell, shuttle-cock, fencing, swimming, &c.

The *passive* are—carriage and gentle horse exercise, the use of the flesh-brush, the cold-bath, electricity, and swinging.

The active exercises are best adapted to the strong, and most suitable for the preservation of health; the passive are more safe and beneficial to the delicate invalid, and to those who labour under slow diseases; for in all acute diseases, as I have remarked chap. xii. rest and quiet are indispensibly necessary.

We proceed now to consider the nature and degree of exercise accommodated to different circumstances.

1*st*. *Age*. From early infancy to the age of 20, exercise promotes the extension of the solids,

solids, and the growth of the body, provided it is not too laborious; between the 25th and 60th years, moderate active exercise supports the powers of the constitution; but after that period the passive exercises are best suited to that feeble and frail state of the body which accompanies old age.

2*dly*. *Temperament*, or *habit of body*. Persons of firm and vigorous constitutions bear active exercises; but, relying too much on their bodily strength, they often exceed; and thereby bring on dangerous inflammatory fevers. Young persons also of a sanguine habit are, from the over-fulness of their vessels, often much injured by violent exercise, and fall into dangerous fevers, spitting of blood, and consumption; especially from that bewitching amusement, *dancing*, particularly in crouded and hot rooms.

Persons of delicate irritable habits cannot bear much active exercise; and as there seems to be in this habit a kind of constitutional propensity to tenderness of the lungs, they may very much injure themselves by violent exercise.

3*dly*. Sedentary persons ought to enter on the use of exercise with much caution; lest the

the sudden stimulus given to the constitution, by violent exertions, should throw the whole frame into great disorder.

Many persons are apt to be whimsically irregular and desultory in this respect, by making sudden transitions from one extreme to another: moderate and steady exercise, pursued daily, is certainly more safe.

Some, however, as an apology for their indolence, have advanced an opinion, that when exercise becomes habitual, or is undertaken with reluctance, it ceases to be a benefit; but this mode of reasoning is certainly very erroneous, and I am the more solicitous to combat this notion, as it is held by some persons of very respectable characters, with whom I have occasionally conversed on this subject.

Man is undoubtedly the child of habit, and the effects of all the non-naturals upon his body are somewhat diminished by frequent repetition; but the labourer, who returns daily to his necessary exercise, does not feel either his appetite or his strength impaired thereby, provided it be not excessive; this is so far from being the case, that it becomes indispensibly necessary for the preservation of his

his health, insomuch that such persons as, from a change of circumstances, have made a transition from labour to indolence, and from penury to affluence, have generally exchanged health for infirmity, and have embittered and shortened the remainder of life.

The reason why the opulent benefit less by their diurnal exercise, is, that they counteract its good effects by a luxurious indulgence of that appetite which their exercise has excited; whilst those who labour from necessity, seldom suffer by excess of repletion, their meals being generally scanty, and not of the most nutritive kind.

Those keen sportsmen, moreover, who in pursuit of pleasure use much more violent exercise than the day-labourer, and return much fatigued and over-heated, think themselves entitled to all the indulgence of a plentiful table, and thereby superadd the fever of digestion to the fever of exercise.

Many years ago, a man of fortune, rather of a delicate habit, but passionately fond of hunting, incurred thereby a very severe fever; and ever after, on the days he hunted, not only avoided all stimulating dishes, and strong drinks, but on those days was more than ordinarily

narily abstemious with respect to the simplest foods; and experienced the benefits of it.

It need scarcely be observed, that little benefit is to be expected from exercise, unless it be performed in a pure air; and hence it is that many manufacturers and artificers, who perform all their labour under cover, and are often exposed to unwholesome effluvia from the materials they work upon, are more unhealthy than any other order of men.

It may be of use to the sedentary and studious to remark, that certain positions of the body are beneficial or injurious.

To study standing or walking is more wholesome than sitting; and stooping, especially leaning against a table, either in reading, writing, or other employment, retards digestion, circulation, and nutrition.

§. 126. Having made some remarks on exercise, as the means of preserving health, it remains that I should offer a few observations on the use of exercise by invalids and persons labouring under chronic diseases.

When the body is weak, and the spirits are depressed, the patients undertake any degree of exercise with extreme reluctance; and by indulging

indulging a habit of indolence, protract and exasperate all their complaints.

Dr. *Cadogan* has justly assigned indolence as one of the great causes of disease; and exercise, accommodated to the strength, is undoubtedly one of the safest and most effectual means of recovery. Whatever the exercise be, it ought never to be carried so far as to produce great sense of fatigue; otherwise, instead of being beneficial, it may be very injurious.

It is surprising how much relief convalescents and sick persons experience by gentle exercise in a good air; and therefore, disregarding all objections, their friends and connections ought to insist on the trial being made; for the first impediment being surmounted, the sick rarely object to a repetition.

When the patient is exceedingly weak, a cotton hammacoe, or cot, ought to be slung in the bed-chamber, or an adjoining room, in the manner they are used in the West-India colonies; in which they may be swung daily to any degree they can bear, using frictions with the flesh-brush, or flannels impregnated with the steams of aromatics. These gentle modes of exercise are peculiarly adapted

adapted to gouty cripples, in the intervals of the fits.

When invalids return from their exercise, which ought to be gradually increased; if they find themselves chilled by the cold air, instead of warming themselves over the fire, they ought to sit down in a remote part of the room until their feelings are gradually reconciled to the temperature of the internal air; as by this precaution all the hazard of rushing from one extreme to another may be avoided.

The exercise of *shuttle-cock* is peculiarly beneficial to such invalids as have sufficient strength to undergo it; as by the various exertions of the muscles of the limbs, and of the trunk of the body, and the alternate compression and relaxation of the blood vessels and secretory organs, the circulation is promoted, the excretions, *especially perspiration*, are increased, the relaxed fibres strengthened, and the nervous system invigorated. When the invalid is confined by bad weather, this exercise, or that of the *chamber-horse*, ought to be performed several times a day, in a room ventilated by an open sash, taking care to avoid the draught of air; and

this will be a more salutary mode of warming the body, than by the heat of fires.

I have already made some remarks (Essay II. of this Volume) on the danger of passing from heated rooms into the external air; and the means of avoiding it.

There are many instances recorded of the great efficacy of exercise in the cure of diseases. *Plato* tells us, that *Herodicus* was cured of the hypochondriacal disease by exercise.—*Pausanias* relates, that *Hysmoneus* was relieved from great weakness of nerves, by addicting himself to the five Olympic exercises; and thereby acquired such a degree of vigour, as to obtain many prizes at the Games; and *Plutarch* says, that *Laomedon* was so perfectly cured of an obstinate disease by exercise, as to excel in running.

Besides the invigorating quality of exercise, it certainly, by its stimulus, increases the efficacy of medicine, by extending its powers to every part of the system, and at length promoting its discharge by perspiration.

It may be remarked, that no exercise or remedy is more abused than *cold bathing*, as I have had many opportunities of observing; owing to the ignorance of the patient, or of the

the prescriber, with respect to the analogy between the disease and the supposed remedy; nor could blunders of this kind ever happen, were the principles of physiology and pathology tolerably understood.

Those to whom this exercise would be most beneficial, are often deterred from a trial of it by the delicacy of their nerves; but I have always been able to reconcile such patients to it, by directing their beginning the course at home in a tub; the coldness of the water being moderated by the addition of boiling water, gradually lessening its proportion, till they can bear it quite cold. By this expedient I have snatched several puisny infants from the grave, and relieved not a few delicate invalids. Such persons as cannot conveniently bathe in the sea, may bathe with advantage at home, and if they chuse it, may add coarse salt; but I apprehend that sea-bathing derives its efficacy more from the coldness than the saltness of the water; and fresh water is colder than salt water.

CHAP. IV.

SLEEP AND WATCHING.

Analogy between Watching and Sleep, and the ſtimulating and ſedative Regimen—Effects of ſound Sleep—of Exceſs of Sleep—of diſturbed Sleep—inſtinctive Diſpoſition to early Sleep—conducive to Longevity—Degree of Sleep ſuitable to different Periods of Life—to different Temperaments—to whom Sleeping in the Day uſeful—uſeful Hints.

PROP. XIX. THE HOURS OF SLEEPING AND WATCHING OUGHT TO BE ACCOMMODATED TO THE AGE, TEMPERAMENT, AND THE STATE OF HEALTH.

§. 127. FROM what has been ſaid, Vol. I. Eſſay I. it is manifeſt, that the conſtant internal exerciſe of the various organs requires not only a ceſſation from muſcular exerciſe, but a diminution of that ſtimulus which the ſoul, whilſt we are awake, imparts to the organs of ſenſation and involuntary motion; and this can only be effected by ſleep, which is indiſpenſibly neceſſary.

After

After referring the reader to Vol. I. Eſſay I. page 31, &c. for the effects of ſleep; it may be remarked, that as watching acts as a ſtimulant, ſo ſleep is a ſedative; there is therefore an analogy between theſe and the two claſſes of foods and drinks.

§. 128. The effects of ſound ſleep are, a more ſlow and equal circulation of the blood, and a more temperate and ſteady diſtribution of the nervous influence to the organs of involuntary motion; the chief of which are, the heart, lungs, and organs of nutrition; whilſt thoſe which ſupply the muſcles, as organs of voluntary motion, are allowed ſome hours relaxation from laborious exertion; and the mind, by a ſweet and ſalutary oblivion, is relieved from its exertions, its cares, and anxieties; ſo that the waſte both of mental and bodily powers is compenſated by ſleep; and both are reſtored to priſtine vigour.

During ſound ſleep, the nouriſhment is diſpenſed more regularly, and applied more properly, to the waſted ſolids, than when we are awake, and the body perſpires more ſteadily and copiouſly, eſpecially if a perſon

ſleeps quietly. After a good night's reſt, the body is *abſolutely* lighter, becauſe between two and three pounds of our humours have gone off by perſpiration; and *relatively* ſo, becauſe nothing tends more to give a ſenſation of *lightneſs* and alacrity than an equal and liberal perſpiration.

§. 129. If ſleep be too long protracted, the body is enervated, inſtead of being refreſhed; and the powers of the mind become languid and oppreſſed.

§. 130. Diſturbed and broken ſlumbers, inſtead of relieving either body or mind, enfeeble both, perhaps to a greater degree than even exerciſe itſelf; and have, perhaps, as bad effects, eſpecially on invalids, as uninterrupted watching: for in ſuch caſes the perſpirable matter is retained, and the body is not duly nouriſhed.

§. 131. Thoſe animals who inſtinctively follow the dictates of nature, go to reſt as the ſun deſcends below the horizon; and awake as he aſcends above it. Even man, when not far remote from a ſtate of nature, obeys

obeys her dictates in the ſame manner. Darkneſs is beſt adapted to a ſtate of reſt, as light is to our daily employments; and therefore thoſe who deviate from this law of nature, muſt neceſſarily and eventually pay the penalty.

A noble Lord,* who formerly diſtinguiſhed himſelf in an eminent degree at the bar, informed me ſome years ago, that when any very old witneſſes preſented themſelves in court, he upon enquiry found, that, whether their modes of life had been temperate or intemperate, they always went early to bed, and roſe early.

§. 132. Different periods of life require different degrees of reſt or ſleep. During the firſt two or three months, the infant ſleeps almoſt conſtantly; in proportion as it becomes more attentive to external objects, it becomes more wakeful, but ſtill requires ſome intervals of reſt during the day; by which the growth and extenſion of the body is promoted. When the child begins to walk, its exertions, eſpecially if it be weak and ſprightly, are often too great for the

* Lord Grantly.

bodily

bodily ſtrength; and ſuch children ought to be indulged, if they ſhew any propenſity, to take a little ſleep during the day. All children, and young perſons eſpecially, ought to be accuſtomed to going early to bed, and riſing early. As ſleep contributes very much to the growth of the body; when that is compleated, fewer hours ought to be employed in ſleep from the 25th to the 55th year; when the approaches to old age, or a ſecond childhood, require more indulgence in this reſpect.

With reſpect to perſons of different conſtitutions, much depends on cuſtom. To perſons of ſtrong conſtitutions, who lead an active and laborious life, ſeven or eight hours ſleep is ſufficient: Perſons who are full of blood, or ſuch as are corpulent, ought to be ſatisfied with leſs, and particularly avoid a ſoft bed, and heavy covering. Perſons either conſtitutionally, or from diſeaſe, of a cold lax habit, are much injured by ſpending many hours in bed.

At every period of life, excepting old age, perſons ought to be habituated to the uſe of a mattraſs, without or above a feather-bed: a ſoft bed is perhaps more injurious than heavy

heavy covering, becauſe it heats and enervates the body, and promotes too copious a perſpiration, a diſcharge, of any to which the body is ſubject, the moſt weakening: Children, eſpecially the puiſny, ought to be accuſtomed to a hard bed, and ſlight covering; as the body is thereby invigorated.

Sanctorius and *Liſter* both recommend an hour's ſleep after dinner, for perſons who have a weak digeſtion; and I had a very near relation who ſlept after dinner, for the laſt fifty years of his life, and died at the age of eighty-two: But a more ſalutary expedient would be, never to take in ſo much food as to create a propenſity to ſleep at that time of the day.

Invalids, whether from weakneſs, or fatigue after exerciſe, often expreſs an inclination to ſleep for an hour during the day; nor do I conceive that there can be any cogent objection to this indulgence being granted them: as their exhauſted ſpirits are recruited by this receſs from bodily and mental exertion, and their ſleep during the night is very little, if at all, interrupted by it.

Many real or imaginary invalids, having, as they ſuppoſe, had little ſleep in the courſe of

of the night, offer this circumſtance as an apology for lying late in the morning: But this is a very injurious indulgence, as it exceedingly enervates the body by long continuance in a hot and foul air. A little reſolution will enable invalids to ſurmount this deſtructive habit; for by riſing early, and going to bed in due time, their ſleep will become more ſound and refreſhing.

It may be, and has been alledged, that thoſe who are ſo unfaſhionable as to go to bed at regular hours, muſt exclude themſelves from all faſhionable ſociety; they have, however, their alternative, whether they ſhall be *faſhionably* invalids, or unfaſhionably in health.

§. 133. From the effects of ſleep enumerated above, my readers will infer, that as regular hours are neceſſary to the preſervation of health, ſo they are indiſpenſibly neceſſary for the recovery of it; and that balmy repoſe, which ſuſpends the diſtreſsful ſenſations conſequent of ill health, is only to be obtained by habitually appropriating thoſe hours to ſleep, which nature has pointed out; whilſt, by inverting the order of nature, we waſte

waſte many of thoſe hours, which might be uſefully employed, even by the opulent and independent.

It may not be improper to remind the reader, that ſleep will be much more beneficial and refreſhing, in proportion to the free ventilation of the bed-chamber.

CHAP.

CHAP. V.

Regulation of the Appetites and Passions.

Exceſs of Paſſion and irregular Appetites why injurious—how to be regulated or counteracted—Hint to the Fair Sex—to the Young of both Sexes—Paſſions of the Sick to be regulated—Hope and Cheerfulneſs to be excited.

PROP. XX. The effects of the passions must be different, according as they are stimulating or sedative, cheering or depressing, and the degrees of these.

§. 134. THE Paſſions (ſays Pope) are the gales of life; but if they are not happily tempered either by conſtitution or by education, they become the whirlwinds and hurricanes of the mind; and neither rank nor wealth can afford any compenſation for their baneful influence.

It may, with truth, be aſſerted, that artificial wants and appetites, as they enlarge the

the field of paſſion, ſo in the ſame proportion they increaſe our deſires of gratification, and afford more frequent occaſions for diſappointment and mortification, than of rational enjoyment.

§. 135. The appetites and paſſions have a powerful influence on the body, and contribute more than is generally ſuſpected to its healthy or morbid ſtate.

This ſubject has been conſidered, Vol. I. Eſſay I. under the Natural Hiſtory of the Human Mind, page 90, to the end of the Chapter; which the reader ought to peruſe before he proceeds. It may be proper to obſerve, that as the exciting paſſions act on the body as powerful ſtimulants, ſo the depreſſing paſſions often produce all the effects of the moſt powerful ſedatives.

§. 136. The only means to avoid theſe evils, is not to employ the mind ſolely in frivolous purſuits; but to ſtrengthen its powers, and ennoble and exalt its views, by the acquiſition of uſeful knowledge.

It peculiarly imports the Fair to recollect, that the turbulent paſſions injure the conſtitution,

tution, ruin the complexion, and deſtroy that equanimity, ſweetneſs, and gentleneſs of diſpoſition, which are the chief ſource of their pre-eminence over man, by which they conciliate his affection and eſteem, ſweeten his labours, and ſoften his cares.

I hope the faſhionable youth of both ſexes (if any ſuch ſhall deign to read this morçeau) will not be offended at this *apparent* departure from my medical office, by commencing preacher; for though ſermons by a phyſician would not be quite a novelty; yet it may be doubted, whether, in the preſent age, the imputation would not be unfavourable to its acceptance with the public.

The truth is, that as ſtrength of mind, and culture of the underſtanding, enable us to perform the duties, and reliſh the pleaſures of life; ſo nothing contributes ſo much to enable us to ſupport the evils of it with firmneſs, and in the ſame degree aſſiſts in alleviating and ſurmounting our bodily ailments.

§. 137. There is ſo intimate a connection between the mind and body, that they mutually influence each other; and hence it is that

that bodily diſeaſes are either exaſperated or alleviated by the ſtate of the mind. It is therefore of the utmoſt importance, that the mind of the invalid be ſuſtained by hope, and cheered by diverſity of amuſement; and that every ſerious occupation and painful paſſion be induſtriouſly avoided.

It is for this reaſon, chiefly, that change of place has been ſo much recommended to invalids; and excurſions to watering-places, beſide the benefit derived from the waters, have contributed to enliven the mind of the invalid, by change of ſcene, and a *moderate* uſe of diverſified diſſipation.

APPENDIX

I.

Containing ſome farther Obſervations on Mr. TICKELL'S *Æthereal Spirit; with Practical Remarks on the medical powers of the Dulcified Acids.**

Ex quovis *ligno* non fiat Empiricus?

We wage not war with Bedlam and the Mint.

POPE.

HAVING made ſome remarks on this empirical noſtrum in the Natural Hiſtory of the Human Body and Mind, lately publiſhed, I am induced, by various motives, to reſume the ſubject.

When Mr. *Tickell* the apothecary addreſſed a letter to Sir *Joſeph Banks*, communicating

* This Appendix has been delayed as long as poſſible, in expectation of Mr. T.'s reply to my former remarks; and as that has not appeared, I ſhall endeavour to anticipate ſuch of his objections as, it has beenrumoured, he intends to make; for I certainly ſhall not reply in a ſeparate publication. I have avoided the publication of the names of thoſe Gentlemen who have ſupplied me with facts; but ſeveral of them have given me leave to communicate to Mr. T. if he requires it, on what authorities thoſe facts have been advanced; for I diſdain the idea of injuring *even a Quack*, by *intentional* miſrepreſentation.

what he deemed to be the beſt manner of preparing *Hoffman*'s Anodyne mineral liquor, and ſubjoined caſes of the efficacy of this moſt valuable medicine, both the matter and the manner of this liberal communication did him credit; but when a man begins to ſwerve ever ſo little from the rule of right, and adopts a devious and crooked line of conduct, every ſubſequent act generally manifeſts a certain degree of depravity; therefore, ſince *Tickell* the Quack converted *Hoffman*'s liquor into a noſtrum, his conduct has been uniformly objectionable.*

I ſhall

* When a confidential friend of Mr. *Tickell*'s told the anthor that he knew his quondam antagoniſt, *Stephen Freeman*, to be a contemptible fellow, and unworthy of notice or reply, he aſſured him that Mr. *Tickell* would reply *like a gentleman*; how far his prognoſtic has been verified, appears *even from the advertiſed title of his pamphlet*, whereby he ſeems to have linked himſelf in a mean confederacy with two of his brother-quacks. Of *Freeman*, the blackſmith and farrier, ſome notice is taken in the preface; the other is ſaid to be a hireling *fabricator* of anecdotes, and *murder-monger* to an evening newſpaper.

Theſe three empirical *vermin*, conſcious of their inability to bring forward any charge that could affect the author's moral and medical character, have undertaken the grovelling taſk of *nibbling* at his paternal and maternal ſurnames; and as quacks are profeſſionally habituated to chicanery and impoſture, it is not ſurpriſing that neither the *farrier*, nor the *murder-monger*, have, in their frivolous attacks, *been guilty* of uttering a ſingle truth, except his having formerly reſided at Antigua.

What

I ſhall make a few remarks on Mr. *Tickell*'s letter to the Preſident of the Royal Society, and ſhall afterwards offer ſome ſtrictures on his advertiſement of this noſtrum, and the various means he has employed to diſguiſe it in the *moſt ſlovenly and unchemical* manner, and cloſe the whole with ſome practical remarks on the dulcified acids.

§. 1. Mr. *Tickell*, in his letter to the Preſident of the Royal Society, does not ſcruple

What inference Mr. *Tickell* intends to draw from this ſolitary truiſm cannot be determined, becauſe his long-threatened reply to the author is not yet publiſhed; but *candour* will probably infer, that his having filled ſome very reſpectable offices in that country, affords a preſumptive proof that he was held in ſome degree of eſtimation.

It is to theſe haberdaſhers of ſmall wares and trifling anecdotes, that Mr. *Pope* alludes in his Dunciad:—

"The common ſoul, of Heaven's more frugal make,
"Serves but to keep fools pert, and knaves awake;
"A drowſy watchman, who juſt gives a knock,
"And breaks our reſt to tell us what's o'clock."

It would be an unpardonable inſult to the publick, and an act of condeſcenſion unworthy of any man who has a character to ſuſtain, to enter into a detailed refutation of what, *were it true*, is totally unimportant; but if this reſpectable triumvirate will bring forward a ſingle well-authenticated fact, which ſhall arraign the author of unjuſt, ungenerous, or illiberal conduct, he hereby, in the moſt ſolemn manner, aſſures them and their informer, of entire exemption from legal queſtion or proſecution.

to aſſert, *what is not true*,* that "the prepa-
"ration generally, nay *univerſally*, ſold for
"*Hoffman*'s Mineral Anodyne, is no other
"than an impure unrectified æther, which
"conſiſts of ſpirit of wine, æther, ſome
"portion of the crude ſulphureous acid,
"and a very ſmall quantity of oleum dulce
"vitrioli."

If the ſpiritus vitrioli dulcis be faithfully prepared, and there is no difficulty in the preparation if the operator has but a moderate ſhare of chemical adroitneſs, it cannot be deemed impure for any medical purpoſes; becauſe long experience has convinced me, that though it is not ſo concentrated as pure æther, its effects, in a proportionably enlarged doſe, are as powerful as thoſe of æther itſelf, in every diſeaſe in which either of them have been found beneficial; and the London College is of this opinion, for in the ſpecimen of their new Pharmacopœia, they have directed the mineral liquor to be prepared by ſimple

* See the London Medical Journal for 1785, p. 337; where he has given a preſcription for preparing Hoffman's Anodyne Liquor. Mr. T. merits praiſe for the candour of the communication; though there are ſeveral miſtakes in that letter, of which I ſhall take notice.

mixture

mixture (not diſtillation) of the common dulcified ſpirit with the oleum dulce.

With reſpect to an admixture of "crude *ſulphureous* acid," it ſhould ſeem that there is a portion of it even in the æther prepared by the accurate Mr. *Tickell*, as it corrodes cork as readily as the common dulcified ſpirit.

Mr. *Tickell* ſays, that the *oleum dulce* is *confeſſedly* the *baſis* of this mineral liquor. By whom is this confeſſed? Not by *Macquer*, who, in his Chemical Dictionary, ſays in expreſs terms, that the mineral ſpirit owes all its medicinal virtues to the æther; and it may be fairly preſumed that neither Dr. *Cullen* nor Dr. *Black* conſidered the *oil* as a neceſſary addition, otherwiſe it would not have been omitted in the laſt edition of the Edinburgh Pharmacopœia. The mode of preparing the ſpiritus vitrioli dulcis, directed by the Edinburgh Diſpenſatory, is an improvement, becauſe it obviates any accidental ſuperſaturation by the acid, from inattention of the operator.

I confeſs there was a time when I thought the oleum dulce was an eſſential ingredient, and was therefore very ſolicitous about aſcertaining the proportion uſed by Dr. *Hoffman*;

but a very expert practical chemiſt, whom I employed to analize the moſt celebrated quack noſtrums, was of opinion that this groſs oil was poſſeſſed of very few active parts, and, for the purpoſe of a comparative trial, ſubſtituted the oil of pepper-mint; and he aſſured me that he found it to be more powerfully ſtimulant and antiſpaſmodic than the common mineral liquor.

Were we even to admit that the oleum dulce is not deſtitute of aroma and ſtimulus, there are ſome caſes, as I ſhall ſhew hereafter, in which the dulcified ſpirit would be preferable; but there would be no impropriety in directing both to be retained as ſhop medicines, as ſome practitioners may have a predilection for that celebrated phyſician's medicine.

Dr. *Hoffman*'s ſkill as a chemiſt was very great, if we conſider the period in which he lived; and he certainly had too much integrity to make a noſtrum of his mineral liquor; but it is pretty evident that he did not underſtand the real nature of the oleum dulce, which he deemed to be the product of the vitriolic acid, and not of the vinous ſpirit; for I believe few modern chemiſts deem it

it to be any other than a vegetable oil, the reſiduum of the rectified ſpirit; the more active parts of which have been combined with æther. Had Dr. *Hoffman* been appriſed of this circumſtance, it is probable he would not have conſidered the addition of this oil as an eſſential improvement of the medicine.*

To conclude theſe remarks on his letter to Sir *J. Banks*; I cannot avoid expreſſing my ſurprize at Mr. *Tickell*'s aſſertion, that *æther is immiſcible with water*; when every apothecary's apprentice knows, from ocular demonſtration, that water will abſorb the æther

* A pupil of Dr. *Hoffman*'s publiſhed a diſſertation *De Acido Vitriolico Viniſo*, which is to be found in Tom. IV. p. 855. The following inferences may be drawn from this eſſay:

1*ſt*. That *Hoffman* having treated fully of the preparation and medical qualities of the vitriolic æther, in his chemical lectures, it might be deemed ſuperfluous to give a formula of the preparation in his works.

2*dly*. From this author's aſcertaining the quantity of the oleum dulce produced from each pound of oil of vitriol to be ſeven drams, we may conclude that his maſter conceived the oil to be a mineral product.

3*dly*. That Dr. *Hoffman*'s claim as an inventor was grounded partly on adding the oleum dulce to the æther, and partly to his increaſing the proportion of the rectified ſpirit to ſix parts to one of the acid; whereas others had directed it in the proportion of one, two, or three to one; a circumſtance, however, which a modern chemiſt would not conſider as an eſſential improvement.

very

very conſiderably; and it ſhould ſeem that they neutralize each other.

§. 2. I proceed now to make ſome remarks on Mr. *Tickell*'s advertiſement, now before me, which is drawn up in the genuine ſtile and ſpirit of empiriciſm. He tells us *that it has great efficacy in all diſeaſes of the ſtomach.* This aſſertion is thrown out *ad captandum vulgus*; for *even* Mr. *Tickell* ſhould have known, that the diſeaſes of this organ are, in ſeveral inſtances, ſo oppoſite in their nature, that no one remedy can be adapted to all. Of this, among ſome others, a ſtrong proof has lately occurred; an eminent phyſician having, a few days ago, been obliged to order a *gouty* patient to be bled, for the purpoſe of removing an inflammation of the ſtomach brought on by the uſe of *Tickell*'s noſtrum.

After having recommended it in diſeaſes of the breaſt *unaccompanied with inflammation*, he ſubjoins, that in "*hectical habits* it "more efficaciouſly relieves the cough which "is the forerunner of a conſumption, than "any other remedy."

I believe that phyſicians are generally of opinion, that *hectic* fever, when connected with

with viſceral obſtruction, eſpecially of the lungs, indicates either that inflammation has abſolutely taken place in the diſeaſed organ; or that there is a ſtrong propenſity to this ſtate, even in the commencement of the fever; and therefore preſcribe ſuch remedies and regimen as may obviate the impending evil; and, from my extenſive knowledge of the powers and effects of vitriolic æther, I aver, that *Tickell*'s noſtrum muſt be a very unſafe remedy in a *hectical* cough; and inſtead of preventing conſumption, may, more probably, promote the fatal tendency. Here Mr. *Tickell* ſeems not to have diſtinguiſhed between the effects of æther and thoſe of ſimple acids; the latter being often very uſeful in mitigating hectic heats. If the reader wiſhes to know my reaſons for this opinion, they are to be found in page 346, &c. of this volume. In ſpaſmodic coughs, and in ſuch as proceed from a tough mucus in groſs and cachectic habits, I have ſeen very good effects from the dulcified ſpirit of vitriol or of nitre; not, I am ſure, to be exceeded by *Tickell*'s noſtrum.

Mr. *Tickell* tells us, that his æther has *ſpecific* virtues in dropſy of the breaſt.

Though

Though the term *ſpecific* was formerly adopted, even by ſome medical men of character; yet there are few phyſicians who, in this more enlightened age, do not conſider the application of it, in its *medical* acceptation, as unphiloſophical and abſurd; and it is therefore given up by modern phyſicians, as implying ſomething independent of the eſtabliſhed laws and operations of the animal œconomy. The doctrine of modern therapeutics has equally exploded *ſpecific*, elective, and infallible remedies; and as none but a *quack* would give a poſitive aſſurance of curing *even a cut finger*; ſo no man, who has any pretenſions to medical ſcience, would, *a priori*, aſſert that a medicine will produce a certain effect; or aver that, becauſe it may have ſucceeded in one or two caſes, it muſt *neceſſarily* produce the ſame good effects in all caſes *apparently* ſimilar.

A Dropſy of the Breaſt is an obſcure, and, I believe, a rare diſeaſe, and probably often ſuſpected when it does not exiſt; but no man of ſound medical judgment will venture to aſſert, that Mr. *Tickell*'s noſtrum can act more *ſpecifically* in a dropſy of the breaſt, than in any other ſpecies of dropſy; and I will ſtake the

the little reputation I have as a phyſician on the event, when I aſſert, that it will fail as often as the other dulcified acids, or any other celebrated diuretics.

But granting that this noſtrum may occaſionally and *fortuitouſly* diſcharge a dropſical collection of ſerum from any cavity, the diſeaſe is only palliated, not cured, as I have ſhewn Vol. I. Eſſay II.

§. 3. I come now to trace Mr. *Tickell*'s noſtrum through its various changes and diſguiſes, to its preſent form as a patent medicine.

1*ſt*. I have ſeen ſome of the æther as prepared according to the preſcription he publiſhed in 1785, and it is only a more concentrated and dulcified ſpirit of vitriol.

2*dly*. Having examined a phial of this medicine, even after it became a patent drug, I found it to be without colour, the æther ſwimming in a portion of water, and impregnated very ſlightly with the ſmell of pennyroyal.*

3*dly*.

* I am accuſed of miſrepreſentation, in having alledged that he has a ſtronger æther, which he reſerves for his private practice; but this confirms it: for what I ſaw *uncoloured* was ſent to an apothecary

3*dly*. To diſguiſe it ſtill farther, when intended for public ſale, a red colour was now given to it, to conceal the ſeparation of the æther from the water; and a larger portion of what I conceive to be oil of pennyroyal, or of juniper, was added, for the purpoſe of weakening the predominant flavour of the æther; but the mixture was uniform.

4*thly*. When Dr. *Falconer* and myſelf examined the phial of *Tickell*'s noſtrum, which was purchaſed for the purpoſe of making the experiments mentioned Vol. I. page 249, &c. we found a red liquor ſwimming in a greyiſh fluid of a groſſer conſiſtence, which ſeemed to be an eſſential oil imperfectly mingled with a watery fluid.

Theſe different additions, enumerated above, were ſolely intended to diſguiſe the noſtrum; for the dulcified ſpirit is the only part of the compound from which any efficacy could be expected, and, ſo far from meliorating the medicine, it has rendered it more offenſive to the eye, more diſguſting to the palate and ſtomach, and, from the addition of a hot

apothecary for the uſe of a patient who had conſulted Mr. *Tickell*, and of this the doſe was from 15 to 30 drops, whereas that of the coloured is more than double the quantity.

oil,

oil, more unſafe in many caſes; and to this addition we may probably attribute its inflammatory effects in the gouty patient mentioned above.

But, it ſeems, Mr. *Tickell*, not depending on his *ſpecific* æther, bolſters it up with a *ſpecific* pill; and it will be very hard indeed, if there is any diſeaſe which fleſh is heir to, that can reſiſt two *infallible ſpecifics*; and yet it is more than an even chance that they will more frequently fail than ſucceed.

Some of the apothecaries of Bath have complained that ſeveral of their patients have deſerted them, and employed Mr. *Tickell*, in conſequence of an inſinuation that he increaſes the efficacy of his noſtrum by certain additions.

If this be true, Mr. *Tickell*, independent of any injury his brethren may ſuſtain, has been deficient in his duty to the public, by not diſcovering every circumſtance which renders his æther ſafe and efficacious, even in the hand of an old nurſe.

The late Dr. *James*, who had more genius, learning, and integrity, than all the quacks this kingdom ever produced; and who was forced into that ſituation by neceſſity, and not

not by choice; was very explicit in pointing out the concomitants of medicine and regimen neceſſary during the uſe of his powder; and from want of this precaution, empirical noſtrums have often done much injury.

Mr. *Tickell*, it ſeems, denies his having ſaid that he diſtils his æther ſeven times; this might have been a miſtake in the perſon who gave me the information; but, having prepared his pure æther, there was no neceſſity for combining the oil with it by diſtillation; for ſimple mixture is ſufficient.

§. 4. It has been confidently aſſerted that ſome phyſicians of Bath have permitted their names to be publiſhed as vouchers for the efficacy of Mr. *Tickell*'s medicine.

Though I cannot believe it; yet admitting the poſſibility of it, what does it imply? Nothing more than that a medicine which has been known, and very extenſively uſed, during a ſpace of ſixty years; but which has been diſguiſed, but not improved, by Mr. *Tickell*; has been accidentally beneficial in ſome caſes, combined with, and aſſiſted by, other remedies.

It

It is generally ſuppoſed, that in the caſe of Mr. *Orpin*, Mr. *Tickell* uſed the æther, the formula of which he publiſhed, combined with vinegar of ſquills and camphor julep; and that his ſucceſs in this caſe ſuggeſted to him the idea of procuring a patent; and it is more than probable, that many patents have been obtained on ſuch frivolous pretexts as the addition of one or two inſignificant ingredients.

But is there a phyſician ſo ignorant of chemical principles, as, after having examined *Tickell*'s diſguiſed æther, to believe that it can poſſeſs ſuperior powers to thoſe of the dulcified acids? I aver that it does not.

Phyſicians have ever been averſe from countenancing empiriciſm, not from any mean or ſelfiſh conſideration; but from an entire conviction that all empirical pretenſions are fraudulent and illegal, and productive of manifold evils to the community.

The ſucceſs of empiriciſm may, with juſtice, be chiefly attributed to the indolence, timidity, or injudicious deſpondency of regular practitioners, who, being diſappointed of their expectations from the common routine of practice, are either too indolent or

too

too timid to avail themſelves of ſuch expedients as ſhall be adequate to the ſingularity or urgency of the caſe; and by precipitantly declaring patients to be incurable before they have made every poſſible effort, force them to have recourſe to empirics, whoſe temerity being equal to their ignorance, they ſometimes ſucceed by a bold uſe of remedies which being pilfered from regular practice, would certainly be employed with more ſafety and ſucceſs by men of ſkill.

§. 5. To render this eſſay more practically uſeful, I ſhall ſubjoin ſome obſervations on the medical powers of the dulcified vitriolic and nitrous acids.

About the year 1736, *Clutton*, a worthy quaker and chemiſt in London, publiſhed a pamphlet, in which he gave a formula of a febrifuge, wherein (not knowing that the acid of ſulphur and of vitriol were the ſame) he preſcribes the dulcified ſpirits of ſulphur, vitriol, and ſea ſalt, in equal parts, to which he ſometimes joined aromatics.

When I was a very young man, I had an opportunity of remarking the very beneficial effects of this febrifuge in a variety of fevers of different kinds.

The high opinion I entertained of Dr. *Hoffman*, induced me to wiſh for an opportunity of giving his mineral liquor a fair trial, which I had ſeveral years after, by procuring ſome to be prepared by a ſkilful chemiſt according to the formula of the Pariſian diſpenſatory. But on an accurate compariſon of this and pure æther with the dulcified ſpirits of vitriol, nitre, and the marine acid, (the laſt is the leaſt perfect) I have not been able to diſcover any remarkable difference in their medical powers in any other reſpect than that when, in caſes of violent nervous pains and ſpaſms, I wiſhed to make a great and ſudden change on the ſyſtem, the æther acted more immediately and powerfully.

It is to be obſerved, that, in the ſubſequent remarks, I refer to the uſe of the æther, as well as the weaker dulcified acids, in chronic caſes; but that in febrile diſeaſes I never ventured to adminiſter the æther.

1*ſt*. In fevers, whether ſimply remittent, or intermittent, or complicated with malignity, putreſcency, or nervous irritability; I have had very extenſive experience of their great efficacy, as antiſpaſmodic, ſedative, and

anodyne, in caſes where the uſe of opium might have been deemed improper or unſafe; and I have often ſeen anxiety, pervigilium, and even delirium, removed by them in the ſpace of a few hours; the term of the fever *apparently* abridged; and a compleat criſis produced in thoſe kinds of fever, which, being commonly protracted for weeks, generally terminate imperfectly, and almoſt inſenſibly. In caſes of imminent danger, however, I availed myſelf of other aids; eſpecially of conſiderable doſes of the extractum cicutæ and camphor, and either the warm pediluvium, or the whole bath.

In fevers connected with local inflammation, I did not venture on theſe remedies until the inflammation was in a great meaſure ſubdued; and then they were evidently of uſe in mitigating irritation, and procuring ſleep.

In general they were combined with ipecacuanha or antimonial wines, in the proportion of 5, 4, 3, or 2 parts to one of the wines, and of this compound, from 20 drops to 2, 3, or 4 drams to a doſe, was given at longer or ſhorter intervals; but always in gradually increaſed doſes, according to the age

age of the patient, and the ſtate of the ſtomach, and of the finer excretions.

The liberal, and almoſt unlimited, uſe of the febrifuge directed by *Clutton*, convinced me that the dulcified acids might be uſed in very large doſes, when well diluted; and I am from experience alſo convinced, that the ſimple acids, the vegetable eſpecially, may be gradually increaſed to a very large doſe.

In caſes of great debility, I often ſubſtituted the ſpiritus volatilis aromaticus, which is a kind of alcaline æther, inſtead of the nauſeative wines; or gave theſe in diminiſhed doſes. I ſhall only add, that the dulcified, and ſometimes the ſimple acids, are, in certain caſes, excellent adjuncts to the bark; not only as aiding its powers, but rendering it more grateful to the palate and ſtomach.

2dly. In the very extenſive tribe of chronic diſeaſes which are either chiefly, or ſecondarily, connected with exceſſive or depraved ſenſibility, I have found pure æther to procure conſiderable, and ſometimes almoſt inſtantaneous relief in violent cramps in the ſtomach and bowels, whether proceeding from exceſs of irritability, or from irregular or retrocedent gout; but I have rarely uſed

it of late in the latter caſe, ſince I have experienced the benefit of large doſes of muſk. In caſes of confirmed epilepſy, it has never been more than a palliative under my direction; but in ſuch caſes as are ſometimes termed hyſterico-epileptic, its effects are more certain.

In nervous head-ache, ſpaſmodic aſthma and cough, hyſterical and hypochondriacal affections, and in all thoſe complaints of the ſtomach and bowels, which, being accompanied with ſenſations of nauſea, conſtriction, anxiety, or pain, are probably the reſult of debility combined with morbid irritability; the ſedative effects of the dulcified acids are ſometimes very conſiderable, when adminiſtered in doſes from one to three drams, either combined with the volatile ſpirit, the nauſeative wines, or uſed alone: Sometimes I have combined theſe with tinctura thebaica in various proportions, either to obviate a diſagreeable ſenſation which large doſes of the dulcified acids ſometimes produce in the ſtomach; or to increaſe their anodyne, diuretic, and ſudorific power.

P. S. I had

P. S. I had ſo compleatly anticipated Mr. *Tickell* in the Appendix, that on a peruſal of his pamphlet, *alias* his quack advertiſement, neither his caſes, allowing them to be genuine and fairly related, nor his reaſonings, ſuch as they are, have made any other impreſſion upon me, than to convince me of his fineſſe and duplicity, and to confirm my former opinion, that his preſent noſtrum is eſſentially the ſame with that he publiſhed in the Medical Journal. A variety of concurring circumſtances will, I believe, convince every impartial reader, that this is the caſe.

1*ſt.* In his letter to Sir *J. Banks*, having given two very ſtrong caſes of the efficacy of common æther, he adds, " If æther is ca-" pable of producing ſuch effects, what may " not be expected from a genuine prepara-" tion of *Hoffman*'s anodyne liquor?" and ſubjoins his formula for preparing it; but I have brought forward more reſpectable authorities than *even* Mr. *Tickell*'s, to prove that his preparation is inferior in activity and efficacy to common æther.

2*dly.* He acknowledges in his pamphlet, that he is indebted to Mr. *Wolfe* for the fa-

cility with which he prepares his æther; and it is highly probable that Mr. *Wolfe* communicated to him that very formula which he publiſhed.

3*dly*. When he determined to commence noſtrum-monger, he repented of having been ſo communicative, and to obviate the ſuſpicion of its being the ſame, he now tells us, that the formula *was given on conjecture*; plainly intimating by this that he had never tried it. But is this probable? when I know that before or about that time, he ſent ſome parcels of it to ſome of his brethren, recommending it to a trial.

4*thly*. Notwithſtanding his empirical boaſt of improvement by a peculiar mode of diſtillation, I have the moſt poſitive evidence that my own ſenſes, and thoſe of ſeveral other medical men, could afford, that the mineral liquor prepared in London from his formula, his uncoloured æther, his coloured æther which makes no depoſit, as well as that now at the hoſpital, which does, are eſſentially the ſame; for notwithſtanding the colouring matter, and the eſſential oil, added merely as a diſguiſe, the æther ſtrongly predominates both to the ſmell and taſte.

It

It will not be unfair to aſk Mr. *Tickell*, for which of thoſe preparations of his æther, which he diſpenſes to his own patients, or vends as a noſtrum, he took out his patent? All of them, though different in their ſenſible qualities, were delivered by himſelf, and therefore could have undergone no adulteration. It ſhould ſeem, from theſe circumſtances, that he has made various alterations ſince he gave in his ſpecification, and, in ſtrict juſtice, has therefore forfeited his patent; and it is certain that the four ſpecimens I have ſeen (and there may poſſibly be forty) are, in the opinion of good judges, different *only* with reſpect to the proportions of æther, and of the diſguiſing ingredients: What dependence therefore can be placed in a medicine which undergoes ſuch a variety of changes?

Every perſon, even of a moderate ſhare of chemical knowledge, muſt know that no art of *Tickell*, or rather of Mr. *Wolfe*, can render his æther more pure or powerful, than the common æther duly prepared, nor will any medical man of ſkill believe, that any other article of the materia medica is of ſuch ſuperior power, as that in ſo ſmall a doſe of the

the compound it can poſſibly increaſe the activity of the æther, but the reverſe.

Admitting the accuracy of Mr. *Tickell*'s caſes, his celebrated brother, *Graham*, has given a much greater number of ſtrong caſes of the powers of common æther; and I do, from experience, firmly believe, that it is a more powerful medicine than *Tickell*'s noſtrum.

If Mr. *Tickell* had been candid, he would have given us the caſes in which his ſpecific failed; which probably are more numerous than thoſe in which it has ſucceeded.

With reſpect to its boaſted diuretic powers: beſides thoſe patients who took it at the hoſpital, ſeveral others have uſed it long without any ſuch effect. It is well known that cremor tartari, or a draught of cyder or water, have produced a moſt copious diureſis in dropſies, when the moſt powerful diuretics have failed; and yet in other caſes none of theſe have had the leaſt effect; and this, for reaſons obvious to every phyſician, muſt ever happen.

In a note to page 173, a *certain* phyſician is brought forward as having a converſation with another medical man, in which he indirectly,

directly, but reluctantly, vouched for the efficacy of *Tickell*'s noſtrum.

From the ſtrong ſimilarity of the circumſtances of this converſation, with what was related to me by an eminent phyſician here, there is every reaſon to believe that he alluded to the ſame caſe. That gentleman having remarked that *Tickell*'s medicine had not manifeſted any diuretic powers, did not ſay that the patient was either cured or *greatly* relieved; but ſimply that ſhe had been relieved; but there is a circumſtance which Mr. *Tickell* either knew not, or has ſuppreſſed, that ſhe was more relieved by *Turner*'s æther than by *Tickell*'s.

If I am not exceedingly miſtaken, that *certain* phyſician, who at *leaſt* merits ſome ſhare of thoſe reſpectable epithets with which a *certain* quack has ſervilely beplaiſtered his patrons, is the gentleman Mr. *Tickell* and I allude to; and who, though he has not ſeen a ſingle inſtance of its being more beneficial than the other dulcified acids, has met with ſeveral inſtances of its inefficacy, and one deciſive proof of its being injurious.

I have not ſpoken invidiouſly, but truly, of Dr. *James*'s powder. I knew and reſpected the

the Doctor as a man of genius and learning, and was ſorry he debaſed his character and talents by placing himſelf on the ſame form with illiterate and ignorant knaves. When in conſultation with phyſicians, he never concealed the mode of preparing his powder, if an explanation was neceſſary to obtain the confidence of the preſcriber.

I have not been inconſiſtent in the paragraph quoted page 169. As quack medicines are all pilfered from regular practice, a phyſician may gratify a patient in the uſe of them, provided he ſuperintends their operation; but this is always rather a matter of conceſſion to the prejudices of the patient, than of neceſſity with reſpect to his ſafety; but the reaſon why all noſtrums ought to be diſcouraged, is, that the pretended inventors are in general groſly ignorant even of the powers of their own noſtrums; and they are moreover made uſe of by perſons who are equally ignorant of the nature of their own diſeaſes, and of the fitneſs or unfitneſs of the noſtrum they take: an inſtance of this occurred with reſpect to the gouty patient alluded to above, and has happened in other caſes, wherein quack medicines have been injuri-

ous.

ous. The danger of misapplying these nostrums is so much the greater, as they are often very active and powerful, and therefore may do much mischief in unskilful hands.

Independent of Dr. *Lewis*'s authority, that *Hoffman* used the dulcified nitrous and vitriolic acids in cases similar to those in which he prescribed the mineral liquor, I well recollect, that the fact is properly stated; but it is so unimportant, that I have not leisure or inclination to run through six folio volumes in quest of the cases.

Whatever may be my *just* pretensions to the epithet of *learned*, which *Tickell* so emphatically bestows upon me, I have never made an ostentatious display of it: but it is probable that even his *very learned* patrons may not be able to produce from my publications any proof that I am *unlearned*.*

My works are before the tribunal of the public; but I will not allow Mr. *Tickell* to be in any respect a competent judge of their

* It has been whispered that the pamphlet is not *solely* the production of Mr. *Tickell*'s pen; it is to be hoped, however, for the credit of the profession, that the base and absurd personal attack is solely and exclusively the illiberal effusion of *Tickell* and his brother quack. [See some remarks by anticipation, on this subject, in a note at the beginning of this Appendix.]

merit

merit or demerit, not only as he is an intereſted and enraged quack; but becauſe I have clearly proved that his ignorance of the firſt principles of medical ſcience is ſo groſs and palpable, that it would ſcarcely be excuſable in an apothecary's apprentice.*

Mr. *Tickell* has been more out of luck in diſcovering the ſources from whence I drew the materials for my laſt publication, than I have been in detecting his impoſture; but independent of thoſe opinions and obſervations, which by much better judges than *Tickell* have been deemed to be original, there was a ſource of knowledge which neither *Tickell*, nor even ſome of his very learned patrons, ever had recourſe to: a regular medical education, at the only univerſity in the Britiſh dominions where it could be acquired.

With regard to the laſt edition of my Medical Cautions, howſoever it may be depreciated by ignorant and incenſed quacks; the opinion of much better judges, and the very rapid ſale of the work, afford a better criterion of its merit, than *Tickell's ipſe dixit*.

* See my remarks on his advertiſement.

He

He and his drivelling champion, the murder-monger, are ſuch egregious dunces, as not to diſtinguiſh the *obvious irony* of thoſe paragraphs of my preface; ſome of which thoſe wiſeacres have quoted as damning proofs of my exuberant vanity and arrogance.—*Excellent Critics!*

The ingenious phyſician, to whom *Tickell* alludes in his laſt page, has had no reaſon to complain of the reception his very learned and uſeful works have had from the public; and from the large ſhare of practice he has long been engaged in, it is evident that the public has had a very juſt ſenſe of his merit as a phyſician.

N. B. Since the Appendix went to the preſs, I received a letter from a medical ſtudent at Edinburgh, containing the following paragraph, which Dr. *Falconer* has alſo ſeen:——

"I waited on Drs. *Cullen* and *Black*, whoſe anſwers I now tranſmit.

"Dr. *Cullen* told me he was the firſt perſon in Scotland who prepared the vitriolic æther; and though there is no conſiderable difference between *Hoffman*'s anodyne (prepared by adding

adding the oleum dulce) and the æther as prepared by the formula of the laſt Edinburgh diſpenſatory, yet he conſiders the latter preparation to be undoubtedly preferable as a medicine. Dr. *Black*'s opinion perfectly coincided with that of Dr. *Cullen*."

I can vouch for the fidelity with which thoſe gentlemen's opinions have been reported. The following inferences may, I think, be fairly deduced :—

1*ſt*. That no man of common ſenſe will believe that *Tickell*'s ſkill as a chemiſt can, in any degree, be put in competition with that of Drs. *Cullen* and *Black*.

2*dly*. That *Tickell*'s formula for preparing *Hoffman*'s mineral liquor, in the London Medical Journal, is not an improvement, but the very reverſe; as the addition of an almoſt inert oil muſt clog the activity of the æther.

3*dly*. As *Tickell* aſſerts, that the ſuperiority of *Hoffman*'s æther depended on this oleum dulce, it may be fairly preſumed, if it is not abſolutely certain, that he would not omit the addition of this oil in preparing his own æther, which he now vends as a patent medicine; and therefore, thus clogged with this oil,

oil, and another eſſential oil for the purpoſe of diſguiſing it; not to mention a portion of water with which it certainly is miſcible in ſome degree, it is really leſs active and powerful than the common æther; and conſequently he has impoſed on the public by vending an adulterated and weaker æther than is to be found in every apothecary's ſhop.

APPENDIX

II.

A PHILOSOPHICO-MEDICAL ESSAY ON THE PRINCIPLES OF THERAPEUTICS.

CHAP. I.

Therapeutics what—this Branch much neglected—Therapeutic Syſtem grounded on a Knowledge of Diſeaſes and of the Materia Medica—Nature and Objects of Therapeutics explained—by Example—Principles of this Branch why ſo difficult of Attainment—Diviſion of the Materia Medica on this Plan.

THE term *Therapeutics* is derived from a Greek verb, which ſignifies to miniſter to, or heal.

Though no branch of the medical art can be more important; yet none has been ſo much neglected. Holding a middle place between noſology and the materia medica, it connects them together; and without this connecting

connecting medium, it will be impoſſible to render the practice of phyſic either ſafe or ſucceſsful.*

In every treatiſe on the practice of phyſic, and the materia medica, therapeutical reaſonings are employed; but they are only looſe and deſultory references from diſeaſes to remedies, and from remedies to diſeaſes.

A very ingenious phyſician, Dr. *Duncan*, has publiſhed Elements of Therapeutics, as a text book; and it is very much to be regretted that he has diſcontinued his lectures on this moſt important ſubject, highly qualified as he is for the taſk.

As the formation of a ſyſtem of Therapeutics muſt depend on our opinions concerning the proper arrangement of the claſſes of morbid affections on the one hand, and of the materia medica on the other; and as there are ſome circumſtances with reſpect to

*I have always been of opinion that, inſtead of connecting this branch with the Profeſſorſhip of the Inſtitutes of Medicine, it might be more properly taught by a Clinical Profeſſor, and the explanatory examples taken from the caſes of the hoſpital patients. A courſe on this plan given by one phyſician in each hoſpital, eſpecially in the metropolis, would afford inexpreſſible advantage to young phyſicians and apothecaries, as it would neceſſarily guide them to a ſcientific, a rational, and a ſucceſsful mode of practice.

both, in which I do not entirely accord with preceding writers; this treatiſe was to have had a place in the firſt volume, but was, by accident, omitted; I have therefore ſubjoined it to this; and it will be of uſe in explaining my doctrines of pathology and regimen, by pointing out the connection between the morbid affections and the materia medica. In conformity to my own ideas, I have divided the materia medica into three grand claſſes; and have taken occaſional notice of ſome of the ordinary ſubdiviſions adopted by other authors, for the purpoſe of ſhewing what connection there is between other ſyſtems and mine.

I wiſh it to be underſtood, however, that this is only a ſhort ſketch.

Before the principles of Therapeutics can be underſtood, it will be neceſſary that the general nature of morbid affections be known; and of theſe I have given the outlines in the former volume; and it will be equally neceſſary that the qualities, operations, and effects of each individual article of what are called medicines, and of regimen, be well underſtood. For the former I refer to writers on the materia medica; as to the latter,

I flatter

I flatter myſelf that the ſubject is conſidered with tolerable accuracy and preciſion in the fifth Eſſay of this volume.

Under each claſs, order, and genus of the materia medica, I have given a ſhort ſketch of the theory of their operations. In ſome inſtances I have offered my own opinions on this ſubject; in others, I have expreſſed my doubts; and where I conceive that the principles on which medicines operate have not yet been ſatisfactorily explained, I have acknowledged my ignorance; but as much has been already done towards eſtabliſhing a juſt theory in this branch, even where we have failed, we ought not therefore to give the ſubject up as inexplicable.*

* The term *Theory*, which I have employed on this occaſion, is often confounded with hypotheſis; but they are as widely different as experimental analogy is from mere conjecture. Theory is the deduction of general principles from particular facts, and the application of thoſe general principles again to particular caſes. *Leibnitz* obſerves, that "ſuch neceſſary truths as are inveſtigated "in abſtract ſciences muſt be founded on principles, and hence "*Euclid* demonſtrated by *reaſon* what is confirmed by the evidence "of our ſenſes." "Perſons (ſays he) whoſe knowledge depends "merely on experience, are not exempt from fallibility, eſpecially "when, in the application of it as a guide in future, we do not "exactly diſcriminate every circumſtance of reſemblance or diſ-"ſimilarity. But philoſophers never depend very firmly on "matter

The doctrine of Therapeutics will be beſt explained by a familiar example.

If a patient is ſeized with ſickneſs and vomiting; I endeavour to diſtinguiſh, among a multiplicity of the poſſible cauſes of this ſymptom, the cauſe of the vomiting. If I diſcover that it proceeds from ſome food which has diſagreed with the ſtomach, this is called the *indicans*, or that circumſtance which points out the nature of the complaint. The next ſtep is to determine on what therapeutic principle, deducible from the nature of the diſeaſe, former experience, and a knowledge of the materia medica, this ſymptom is to be removed; and from all theſe I conclude that the offenſive cauſe ought to be diſcharged by the moſt natural outlet, in the moſt

" matter of fact, but endeavour to penetrate into the motives or " efficient cauſes of ſuch facts, in order that they may be quali- " fied to judge where they are to make exceptions to general " rules." The obſervation of this great philoſopher is ſtrictly applicable to the uſe of theory in medical inveſtigations; and I do, from long experience, moſt earneſtly recommend to young medical men of every denomination, that they conſtantly employ reaſoning, founded on accurate analogy, in the application of the principles of medicine as a ſcience, to the practice of it as an art. For even where the analogy, as ſometimes happens, may be incompleat, from a want of ſufficient data, their errors will be but trivial, compared with thoſe of men who, relying on bald experience, never reaſon at all upon the ſubject.

ſpeedy

ſpeedy and effectual manner: This is termed the *Indicatio.* The particular means by which this indication is to be complied with, are next to be conſidered. There are two kinds of evacuants by which the contents of the ſtomach may be carried off, viz. emetics and purgatives. If I prefer the former mode, as moſt expeditious; I next conſider what is the particular inſtrument or means which will be fitteſt for this purpoſe, whether a few draughts of warm water, or a doſe of ipecacuanha, emetic tartar, &c.; and this choice of the individual article of the materia medica, is termed the *indicatum*, or the particular remedy pointed out.

There are certain rules and cautions neceſſary to be obſerved in the uſe of the remedy now ſelected, with reſpect to doſe, time of giving the medicine, the means of promoting the operation, &c. all of which are to be revolved in the mind, and determined upon. But ſome circumſtance in the ſtate of the patient may make this mode of relieving him improper, though on general principles it may be the moſt proper; and this is called the *contraindication*, or that therapeutic principle, by which, after com-

paring all the advantages and diſadvantages which may reſult from the uſe either of any vomit, or of a particular vomit, the concluſion is, that it will be ſafer to omit it; and have recourſe to ſome other means.

This example ſhews, that it is only by a ſeries of accurate reaſoning and deduction, that therapeutic principles can be formed; and that medical practice can neither be ſafely or ſucceſsfully conducted without it.

The principles of therapeutics are more difficult of attainment, on account of the great variety of circumſtances which are to be taken into conſideration; partly ariſing from the nature, degree, obſcurity, or complication of the diſeaſe; and partly from the complicated operation of almoſt every article of the materia medica; the difference between their immediate and ſecondary effects, and between the impreſſions they make on the nervous, circulating and ſecretory ſyſtems; which, eſpecially in a diſeaſed ſtate, are not always in uniſon, or, in other words, are not ſubjected to the ſame laws of impreſſion from the operation either of medicine or of diet.

The

The various articles of the materia medica and of diet, may be divided into ſuch as change the ſolids, or the fluids.

We may divide the changes made on the ſolids into *mechanical* and *animating*.

Thoſe which act on the fluids may be conſidered under the general term *alterant*.

Thus, upon the preſent plan, the whole materia medica is brought under three heads or claſſes, each of which admit of various ſubdiviſions into orders and genera; in the conſideration of which I ſhall endeavour to render my examples as practically uſeful as the brevity of my plan will permit; for an ample diſcuſſion of the ſubject would occupy volumes.

Though the medical powers of regimen are, generally, very inferior to thoſe of medicine, yet I have given them a place here, after medicine, merely to ſhew the connection between them: Some of them, however, may be employed to important medical purpoſes; and it would redound to the benefit of mankind, if they were more frequently ſo employed.

In forming a new ſyſtem, the author has a right to chuſe his own terms, provided he explains

explains them properly; here, to avoid circumlocution, I have employed the general term POWER, which implies quality, operation, or effect; and to that the mode by which that power is exerted is prefixed, as animating, mechanical, or alterant, being the titles of the three claſſes. The diviſion of the orders and genera will occur under each claſs; and ſome of the moſt powerful of the ſpecies are taken notice of under the examples.

To explain the operation of medicines on the body, we muſt conſider it as relating to the changes made on the *living* or animated ſolids, or ſuch as are endued with ſenſation or feeling; and ſuch as are made upon them as *dead* fibres, independent of the nervous energy; and the latter change may be termed *mechanical:* and ſuch as are made on the fluids, which may be termed *alterant*.

CHAP.

CHAP. II.

Animating Powers.

Animating Powers what—Motion the Source of Life—Stimuli what—every Organ has its peculiar Stimulus—Stimuli unnatural or preternatural—tonic, clonic, and paralytic, what—Stimulants what—their different Genera—Sedatives what—their different Genera—neral Reflections on their Medical Application.

THE term *animating* means ſimply any article of the materia medica which acts primarily on the living principle; or that by which ſenſation and motion are produced; and by which life itſelf is ſupported. This term does not however imply, that either ſenſation or motion are thereby always excited or increaſed: for (as has been ſhewn Vol. I.) they being often, under diſeaſe, exorbitantly increaſed, the reſtoration of health depends on their being reduced to their natural ſtandard.

Before

Before we enter on a conſideration of the *orders* of this claſs, it may be proper to lay down a few general poſitions:—

1*ſt*. That motion is the ſource of life.

2*dly*. That there muſt be ſome phyſical cauſe, by which this motion is excited and ſupported.

3*dly*. That this cauſe, which may be properly termed *ſtimulus*, ſpur, or exciting cauſe, ſubſiſts in health; and may be deemed the *natural* ſtimulus; and, (as has been ſhewn Vol. I.) that each organ has its proper ſtimulus.

4*thly*. That when the qualities of the *natural* ſtimuli are changed; or another ſtimulus is added, the motions of the organs may be morbidly increaſed; and therefore ſuch ſtimulus will be preternatural.

5*thly*. That when the natural ſtimulus does not act with its wonted power, or ſome accidental cauſe acts ſo as to weaken the powers of ſenſation or motion, or both, the motions of the organs may be morbidly diminiſhed.

6*thly*. From the premiſes, it appears, that the diſtinctions of tonic, clonic, and paralytic, eſtabliſhed by authors, are well founded; the

tonic

tonic implying conſtant contraction or *ſpaſm*, an example of which we have in *cramp*; the *clonic*, or alternate contraction and relaxation, an example of which we have in *convulſion*; the *paralytic*, or a deficiency of motion, as in various kinds of *palſy*; and that theſe various morbid affections of motion, being connected with different degrees of exceſſive, depraved, or deficient ſenſation, may affect every organ endued with ſenſibility or feeling.

Order I. Stimulants.

After what has been ſaid, it need only be obſerved, that the term means ſuch articles of the materia medica as excite or increaſe ſenſation, motion, or both.

PROP. I. When diseases proceed from, or are connected with, various degrees of languid or deficient power of motion, such means are indicated as may exalt that motion to the standard of health.

This general propoſition comprehends ſeveral genera.

Gen. I. Such remedies as make a quick, but not a laſting impreſſion on the ſyſtem.

Examples

Examples of this genus we have in vitriolic æther, and volatile aromatic ſpirit.

Gen. II. Such as act leſs inſtantaneouſly, but more permanently, on the organs: Examples of which we have in aromatics, ſpices, and their eſſential oils, as oil of cinnamon, &c.

Gen. III. Such articles of the dietetic tribe as are endued with an exhilarating and intoxicating power; as all the fermented drinks, eſpecially generous wines and ardent ſpirits.

Gen. IV. Such foods as are deemed ſtimulant. See Table II.

Gen. V. Such articles of the materia medica as, when applied externally, produce a ſenſation of heat, and an increaſe of ſenſation and vital motion: ſuch are, friction, (eſpecially with any of the ſtimulants, Gen. I. and II.) ſtimulating cataplaſms, bliſters, and electricity.

The mode by which the different genera of ſtimulants ſeem to act is by an immediate impreſſion on the nerves of the organs with which they come in contact; and through them, by ſympathy, conveyed to the brain and heart, and the ſyſtems connected with them; and excite a temporary artificial fever.

With

With reſpect to internal remedies, it is probable, that their primary impreſſion is on the nerves of the ſtomach, becauſe their effects are often ſo inſtantaneous, that it is impoſſible they could have reached diſtant organs in the courſe of circulation. With regard to their heating quality, may they not act potentially, by throwing a certain portion of extricated fire into the ſyſtem?

The intoxicating quality of Gen. III. may be partly owing to their fixible air, partly to another principle not well underſtood.

Examples of their operation in diſeaſes may be deduced from the effects of vitriolic æther in nervous lowneſs and ſinking;—of the eſſential oils, wine and brandy, in fainting, from defective power of the heart, and conſequent languor of circulation;—of the vigour which ſtimulating foods impart to a hungry perſon;—and the effects of ſinapiſms and bliſters on palſied limbs.

Their effects on the mind are according to the nature of the ſtimulus, exciting grateful, exhilarating, or painful ſenſations.

Stimulants are, *in general*, contraindicated in all diſeaſes where the action of the heart and arteries is ſo much above the healthy ſtandard,

ſtandard, as to render the circulation of the blood rapid and impetuous, as in high and inflammatory fevers; profuſe hæmorrhages, &c.

ORD. II. SEDATIVES, *as the term implies, are ſuch as mitigate or abate morbid motion.*

The remedies of this order act alſo on the living or animated ſolids.

PROP. II. WHEN DISEASES PROCEED FROM, OR ARE CONNECTED WITH EXCESS OF MOTION, SUCH MEANS ARE INDICATED, AS MAY REDUCE THAT MOTION TO THE STANDARD OF HEALTH.

This general propoſition comprehends a variety of circumſtances, which will be explained under the different genera.

Gen. I. Such as act primarily on the nervous ſyſtem by a quick and ſtrong, but not laſting impreſſion; and thereby reſtrain inordinate motions in the nervous ſyſtem; hence the effect of æther in a cramp of the ſtomach, and of muſk in convulſions. Here one ſtrong ſtimulus is oppoſed to another.

Remedies of this genus may alſo be termed *antiſpaſmodics*; and here it may be remarked, that as all affections of the ſyſtem, commonly called *nervous*, are connected with weakneſs of

of the nervous power, antiſpaſmodics are of different kinds, ſometimes acting by a ſtimulating power, as happens from this and ſome of the following genera, and ſometimes by a directly ſedative power, as will be explained hereafter.

Gen. II. Such means as by exciting grateful ſenſations in the nerves of the ſtomach, counteract the ungrateful morbid ſtimulus, either immediately, if the ſtomach is affected, or by ſympathy, if the morbid affection is in a remote organ; and in this way we may account for the good effects of dulcified ſpirit of vitriol, oil of peppermint, or brandy, in hyſterical, hypochondriacal, or gouty nauſea, ſpaſmodic colic, and nervous head-ach.

Gen. III. Such remedies as by creating an ungrateful ſenſation may counteract that which is morbid. On this therapeutic principle, a large doſe of aſafœtida, camphor, or of the oleum animale, is given in an epileptico-hyſterical paroxyſm; a bliſter, or the electrical ſhock, to remove ſpaſmodic pains; and daſhing cold water on the extremities, to remove ſpaſmodic or inflammatory conſtipation.

Gen. IV. Such means as, being poſſeſſed of a lenient, ſoothing, or anodyne power, mitigate

mitigate diſagreeable ſenſations of the nerves of particular organs, either by contact or ſympathy. Hence the effects of a tepid oily poultice applied to an inflamed boil; of tepid oily injections in colics, dyſentery, inflammation of the kidneys, &c.; and of the warm pediluvium, fomentations, or a whole bath of water or oil, in tetanus, fever, or inflammation. On the ſame principle we may account for the operation of tepid emollient gargles in an inflammatory ſore throat; mucilaginous gargles and drinks in aphthous incruſtations of the mouth, throat, and inteſtinal canal; the ſteams of warm water to mitigate cough; and tepid ſoftening fomentations, and cataplaſms, to abate the pain of inflamed wounds and ulcers.

Gen. V. Such remedies as, in various degrees, leſſen or blunt ſenſibility both of body and mind, by producing a certain change in the brain and general nervous ſyſtem, which has not been well explained. Hence the benefit derived from the uſe of *Hemlock* in nervous, febrile, inflammatory, and cancerous irritation. But of all this tribe *Opium* has the moſt direct and powerful effect in leſſening ſenſibility; becauſe, in a large doſe, it will

will deſtroy it, by bringing on a fatal torpor. This drug ſeems to have a compound operation, firſt that of an exhilarating ſtimulus, and ſecondly, that of a ſedative narcotic; but the latter has not yet been ſatisfactorily explained. The ſame quality reſides in various other vegetables as well as the poppy, as in the cicuta, aconite, ſtramonium, &c.

Happy would it be for mankind, were the ſafe and ſucceſsful uſe of this celebrated drug accurately aſcertained; but though volumes have been written on the ſubject, it is ſtill left involved in obſcurity and uncertainty.

Medical men are more embarraſſed with reſpect to the uſe of opium in *febrile* diſeaſes, than in thoſe of any other claſs: I ſhall here offer a hint on that ſubject.

I have already remarked, that the nervous and circulating ſyſtems are not, in diſeaſe, always ſubjected to the ſame laws of impreſſion; or, in other words, that ſuch means as may mitigate nervous irritability, may increaſe morbid irritation in the circulating ſyſtem—An example may explain this.

A, a delicate irritable woman, labouring under a nervous fever, ſuffers exceedingly from anxiety, pain, watchfulneſs, &c.

B, a young plethoric woman, has ſimilar ſymptoms in a fever of an inflammatory type.

C, an athletic man, labours under ſimilar diſagreeable feelings under a pleuriſy.

How does it happen, that opium given to A. will abate all the diſagreeable ſenſations, without increaſing the fever; whilſt, though it may mitigate the uneaſy feelings of B and C, it will exaſperate the fever?

Becauſe, in A's caſe, the nervous and circulating ſyſtems are, as it were, in uniſon; that is, both below the ſtandard of healthy exertion. In B the plethora, increaſed by febrile heat and rarefaction, forces the circulating ſyſtem upon high and ſtrong exertions; and in this ſtate of the circulation, the nerves alſo undergo an extraordinary degree of tenſion. In C, all theſe circumſtances concur from inflammatory irritation.

The moſt direct and immediate operation of opium on the circulation, is by its ſtimulating power, ſimilar to that of wine; and therefore it increaſes the plethora, rarefaction, and fever; which, together with a diminution of the ſecretions and excretions, the conſequence of its narcotic power, muſt contribute

contribute to ſupport the inflammatory diſpoſition, and exaſperate all the ſymptoms. But if by the means ſuggeſted under the following genera, we reduce the vehemence and rapidity of the circulation, the uſe of opium, if ſtrongly indicated by ſymptoms of great irritation, may be admitted with ſafety; becauſe the ſtate of B and C is not *now* very different from that of A.

From not attending to this diſtinction, I have ſeen many untoward conſequences, either from the premature adminiſtration, or the neglect of opium, wine, and other nervine ſtimulants; for raſhneſs and timidity are equally the reſult of ignorance of Therapeutic principles.

Many years ago a pleuropneumony was epidemic in one of our Weſt-India colonies, and was very fatal.

Some died in conſequence of ſphacelus from the violence and rapidity of the inflammation; others ſunk under the large bleedings, deemed neceſſary to ſuppreſs the inflammation; but ſeveral of my patients were ſaved by the liberal uſe of ſalt of hartshorn and opium, ſuggeſted to me by a gentleman, the father of a very able and

reſpectable phyſician of this city.* If this medicine had been adminiſtered during the early ſtage of inflammation, it would certainly have increaſed the diſeaſe; had it been neglected at the critical period, the patient would have ſunk under the complicated evils of irritation, debility, and want of ſleep.

I have ſince that time adminiſtered opium with advantage, in various ſpecies of febrile diſeaſes; and the late very celebrated *De Haen* has recommended the uſe of it in pleuropneumony; but it is a very nice point of practice.

Before I quit this intereſting ſubject, I ſhall ſubjoin a few remarks on the uſe of opium.

1ſt. As its immediate effect is that of a ſtimulant or cordial, when we wiſh to employ it for this purpoſe either in febrile or chronic lowneſs, where there is no conſiderable irritation, ſmall doſes only are required; and in this way I have combined it with the dulcified acids, volatile aromatic ſpirit, and (for the reaſon I ſhall preſently aſſign) the ipecacuanha wine; and have found it very

* Dr. Fraſer: "Sequitur patrem paſſibus æquis."

uſeful,

uſeful, not only in the fevers called nervous, but in thoſe irregular little fevers, which are often connected with chronic weakneſs.

2*dly*. Whatever increaſes the determination to the ſurface, ſo as to increaſe perſpiration, or procure ſweat, renders the uſe of opium more ſafe, and *generally* more ſucceſsful. Hence patients bear larger doſes of opium in Dover's powder, than alone; as the ipecacuanha counteracts that quality, by which it locks up the ſecretions and excretions.

3*dly*. Opium is, under certain circumſtances, equally well adapted to promote or reſtrain evacuations, when the morbid cauſe depends either on ſpaſm, or painful irritation, or both; hence the benefit of opium in the colica pictonum and dyſentery; in the latter the uſe of it requires caution.

4*thly*. When morbid irritation is very great, and opium is proper, the doſe, how apparently large ſoever it may be, muſt be adapted to the degree of irritation, otherwiſe we ſhall be diſappointed. Thus I have known a ſcruple of opium, in one doſe, produce very little ſedative effect in tetanus; and an under doſe of this drug has often increaſed

watchfulneſs and delirium, both which an adequate doſe would have removed. How is this adequate doſe to be aſcertained? By gradually increaſing it, and carefully watching its effects; and thus adminiſtered by a man who preſcribes upon ſound therapeutic principles, it cannot be injurious, and may often produce the moſt ſalutary effects.

Gen. VI. Such means as, by increaſing the firmneſs and tenſion of the *dead* fibre, leſſen, in the ſame proportion, the morbid ſenſibility of animated organs.

The *mechanical* operation of certain medicines will be explained in another chapter; but as they may, ſecondarily, have a ſedative operation on the nervous ſyſtem, it will be proper to take notice of that operation here.

I have remarked, Vol. I. p. 133, that for the purpoſe of enabling the nerves to do their offices properly, they ought to be duly ſuſtained by the *dead* fibres with which they are intimately connected. Therefore if the dead fibres are too weak, lax, or flaccid, ſuch remedies as mechanically increaſe their firmneſs and ſtrength, neceſſarily increaſe the ſteadineſs and energy of the nerves with which they are interwoven: hence we may account

how

how the Peruvian bark, and other aſtringents and corroborants, are ſo beneficial in certain nervous diſeaſes, and in ague, which is, in a great meaſure, a nervous affection.

Gen. VII. Such means as, by diminiſhing the tenſion of the blood-veſſels, either in general plethora, or in particular organs, leſſen the conſequent tenſion of the nerves which are thereby over-ſtretched. Hence we can account for the benefit reſulting from the uſe of ſedative diet, or even ſometimes of bleeding, to obviate or remove hyſterical fits in young women full of blood, or where the overtenſion of the veſſels is confined to one organ; and hence I have known epileptics, who, by intemperance, have brought on a temporary fulneſs of the veſſels of the brain, and ſevere fits, have had them leſs frequently and ſeverely, in conſequence of uſing purgatives and low diet.

Before we proceed to the other genera, it may not be improper to make a few general reflections.

1*ſt*. All the genera hitherto enumerated may be deemed what are commonly called nervous or *nervine* remedies; becauſe, in the diſeaſes in which they are moſt beneficial,

affections

affections of the nerves conſtitute the chief part of the diſeaſe.

2*dly*. From the variety of means, in ſome meaſure of oppoſite natures, ſtimulants and ſedatives, grateful and ungrateful remedies, high and low diet, and even evacuations, we may ſee the abſurdity of ſuppoſing that any particular remedies can be deemed *ſpecific*; and the danger of that routine practice which is ſuggeſted by general terms, and which are commonly vague, unmeaning, or improper.

With reſpect to contraindications to the uſe of the particular genera, theſe may be eaſily comprehended, by conſidering their particular powers and operations.

Gen. VIII. Such as abate and reduce the force of the heart and arteries, by leſſening the quantity of the fluids, as bleeding and other evacuations.

The individuals of this claſs are indicated in all diſeaſes in which the force of the circulation is too ſtrong and rapid; hence the uſe of bleeding in high and inflammatory fevers, and in profuſe hæmorrhages, when they are produced by febrile commotion.

They are conſequently contraindicated in all diſeaſes in which the quantity of the circulating

lating fluids is too ſmall, and the vital powers weak; and hence improper in particular kinds of hæmorrhage, which are the effects of debility and relaxation of the ſolids, rather than of painful irritation.

Gen. IX. Such articles of the materia medica as excite a certain uneaſy ſenſation in the ſtomach, termed nauſea or ſickneſs.

They are indicated in all diſeaſes of violent and irregular commotions of the circulation: hence their uſe in fevers, thoſe eſpecially which are high and inflammatory. What effect have theſe nauſeatives on the nervous ſyſtem? Their direct and immediate effect is a temporary depreſſion of the nervous energy; but as many morbid affections of the nervous ſyſtem proceed from ſpaſmodic or convulſive motions of particular organs, they often produce very ſalutary effects by a counter ſtimulus: hence the efficacy of a doſe of vitriolum cæruleum, or of cuprum ammoniacale, in ſuſpending or diminiſhing an epileptic fit.

They are contraindicated in great nervous or inflammatory irritability of the ſtomach.

This and the preceding genus will be conſidered more fully under the next order.

Gen. X.

Gen. X. Such as, by a potentially cold impreſſion, either in the ſtomach, or on the ſurface of the body, diminiſh or extinguiſh morbid heat. We may form a tolerable idea of their mode of operation from the effects of ſimple acids, nitre and other neutral ſalts, cold water and ice, in the ſtomach of a patient labouring under exceſs of febrile heat; and from ſimilar effects of cold air in ſuch caſes, when applied to the ſurface of the body and lungs.

As it is probable, that what are called heating remedies may throw a quantity of extricated fire into the body, may not cooling remedies act by reducing part of this fire into a latent or fixed ſtate?

Theſe means are contraindicated, when the powers of the circulation and heat of the body are below the natural, and the nervous ſyſtem is weak, either from exceſſive or defective ſenſibility: hence they are improper in hyſterical and hypochondriacal caſes, where there is a defect of nervous tenſion, and in diſeaſes where there is a deficiency or total loſs of ſenſibility, motion, or both, as in different degrees of palſy; and in all thoſe diſeaſes which depend on great debility of the vital

vital powers, as in low fevers, agues, cachexy, and dropsy.

Gen. XI. Such means as by a soothing power mitigate disagreeable febrile sensations from heat or other effects of morbid irritation; hence the effects of tepid pediluvium or whole bath in fevers. See Gen. IV.

Gen. XII. Such articles of diet, &c. as are sedative. See Essay V. chap. 12.

Before we close this long chapter, it may be proper to draw the following inferences:

1st. That some of the preceding genera are equally well adapted to mitigate morbid affections, both of the nervous and circulating systems.

2dly. That all those genera usually termed *nervine* may be employed with safety and success in what are termed low fevers, whether nervous, aguish, remittent, eruptive, malignant, or putrid.

3dly. That in advanced stages even of high and inflammatory fevers, they may become beneficial, when the force of the circulation is considerably reduced.

CHAP.

CHAP. III.——ORD. III.

DERIVANTS.

Derivants what—they act chiefly on the living Principle—ſome increaſe natural Evacuations—why ſo uncertain in their Effects—ſome promote preternatural Evacuations—in what Diſeaſes indicated—their Mode of Operation explained and exemplified—Derivants without Evacuations, their Operation exemplified.

PROP. III. WHEN DISEASES PROCEED FROM, OR ARE SUPPORTED BY, MORBID DETERMINATION TO OR FROM CERTAIN ORGANS, SUCH MEANS ARE INDICATED AS MAY RESTORE THE BALANCE OF CIRCULATION, SECRETION, AND EXCRETION.

REMEDIES of this order are ſo far connected with the two former, that they act chiefly on the living or animating principle, and therefore belong to this claſs.

I have remarked, Vol. I. page 115, that, in health, every organ has a certain quantity of blood determined to and from it, according to eſtabliſhed laws of the circulation; and

and this alſo is the caſe with reſpect to the diſtribution of the nervous power: hence the metaphorical term uſed by phyſiologiſts, of a balance in thoſe ſyſtems.

As many diſeaſes of the nervous ſyſtem proceed from a loſs of this balance; as in ſpaſms and convulſions; ſo many morbid affections of the circulation are owing to faults of determination; and therefore a deviation from this balance, in conſequence of too large or too ſmall a portion of blood being diſtributed to particular organs.

To prepare the reader for underſtanding the following remarks, he is requeſted to ſee what is ſaid on the ſubject, Vol. I. page 142, 203, &c.

With reſpect to the title of this order, it is adopted to expreſs thoſe powers of certain medicines, by which they divert the current of circulation *from* organs to which they have been determined, either with too much force, or in too great a quantity; or which derive that current *to* organs in which the determination is not ſufficient.

The moſt powerful of thoſe determinations are ſuch as increaſe the natural evacuations, or produce ſuch as are preternatural;

as

as bleeding, &c.; others act without any *apparent* discharge, but may nevertheless produce very powerful changes in the internal secretory and excretory organs.

Gen. I. *Derivants with increase of the natural evacuations* are indicated, when the natural excretions are deficient in their proper quantity, instances of which we have in the effects of laxatives in constipation of the bowels, diuretics to promote the renal secretion, emenagogues to promote the catamenia; and frictions, exercise, and warm cloathing, to promote perspiration. Here it may be remarked,

1*st*. That what may be justly deemed the natural evacuations are fewer than are commonly imagined; for emetics, expectorants, sudorifics and sialagogues, or such remedies as promote salivation by mercury, cannot, in strict propriety, be said to promote natural evacuations, for the discharges they promote are really preternatural or artificial.

2*dly*. As no excretion can be promoted with any degree of certainty, unless the means indicated for this purpose act immediately upon the excretory organ; hence it is that diuretics, expectorants, and even sodorifics, very often

fail

fail of their effects, becauſe they can only act circuitouſly or ſympathetically, and when mixed with the whole maſs of blood, their powers muſt be much diminiſhed before they arrive at the ſcene of action; or they may be totally diverted to another excretory organ: hence it is that ſudorifics and diuretics ſometimes purge, ſudorifics and expectorants fall on the kidneys, and diuretics act as ſudorifics and expectorants.

Gen. II. *Derivants with preternatural evacuations* are indicated in ſuch diſeaſes as cannot be ſo ſpeedily or effectually relieved by only promoting thoſe that are natural. This frequently happens in diſeaſes which are ſo violent and rapid in their progreſs, that the natural outlets are not ſufficient for the purpoſe of ſpeedy relief, and eſpecially when the quantity of the circulating blood is too large, either from plethora or febrile rarefaction; hence the uſe of bleeding in high fevers: but they anſwer a more important purpoſe, by diverting, very powerfully, the torrent of circulation from an inflamed or oppreſſed organ; and as this is a very important point of practice, I ſhall offer a few remarks on the effects of bleeding.

When

When an organ of importance is inflamed, the moſt powerful means are to be uſed to check its progreſs. This we know is more effectually done by bleeding, than by any other evacuation; but this does not proceed ſo much from the quantity taken away, as its being done ſuddenly; for when it flows rapidly from a large orifice, the force of the heart is, as it were, inſtantaneouſly reduced near to the natural ſtandard, and hence inflammation has been ſometimes ſuddenly removed by one large bleeding ad deliquium. This is rather mentioned by way of explanation, than to recommend the practice, except in caſes of moſt imminent danger.

This ſudden effect of large bleeding may be partly accounted for on a principle explained, Vol. I. that the bulk and heat of the blood are natural ſtimuli to the heart; ſo, theſe being diminiſhed, the force and frequency of the contraction of the heart and arteries muſt be diminiſhed.

To illuſtrate the doctrine of derivation and revulſion ſtill farther, we may compare the circulating fluids to a river which has a variety of ſtreams flowing from and to it; and to a ſyphon, into the lower end of which the

the liquor flows more readily and copiouſly in proportion as the reſiſtance is removed at the other. If to this idea of a mere hydraulic machine, which was chiefly adopted by the *Boerhaavian* ſchool, we add the principle of animation, by means of the nerves, which was hardly admitted into that ſyſtem; we ſhall form a rational theory of the operation of derivants. Thus, if the current of circulation be ſuddenly and rapidly determined toward a particular organ, it may, like a river, deſtroy its banks; to prevent which, the moſt rational indication will be to divert it with equal rapidity into other channels; and it will more readily return into the natural channel, when the reſiſtance to its reflux, as in the caſe of the ſyphon, is diminiſhed, by leſſening the maſs by evacuation. But ſhould the determination or fluxion to the diſeaſed organ have been ſlow, the means (ſome caſes excepted) made uſe of may act more ſlowly: hence the diſtinction between great and ſudden, and ſlow and gradual, changes, and between the terms revulſion and derivation.

With reſpect to the evacuation of bleeding, it may be farther obſerved, that whenſoever

it is neceſſary, it ought to be uſed early; for delays in this inſtance are irreparable; as the inflammatory accumulation increaſes every moment.

Of the effects of this kind of revulſion, we have other inſtances in bleeding—from the temporal artery and jugular veins, in apoplexy and high delirium; cupping and ſcarification of the temples and nape of the neck, in head-ach and giddineſs; ſcarification of other parts in fixed pains; and applying leeches to inflamed piles; perpetual bliſters, and iſſues, as drains for the purpoſe of leſſening afflux to weak organs, or of carrying off eryſipelatous, gouty, and other *ſuppoſed* acrimonies; and bliſters to the neighbourhood of pained or inflamed parts, where, by exciting a counter-ſtimulus and diverſion, on this account they are more beneficial than from the mere diſcharge.

In the examples adduced above, we have inſtances of both ſpecies of medical derivants ſudden and ſlow; and more will occur hereafter. It frequently happens that the powers of the conſtitution may be ſo perverted or weakened by diſeaſe, or the habits of morbid determination may be ſo obſtinate, that

that even when a diſeaſe has, in a great degree, or totally, ſubſided, a reſtitution of the natural evacuations may not be ſufficient; and the phyſician is often obliged to avail himſelf of artificial evacuations, which, if they have been eſtabliſhed for any time, become, as it were, a part of the conſtitution; and I have often ſeen very bad conſequences from ſtopping the drain. Whilſt I write this, I am in attendance, with an eminent phyſician, on a patient, whoſe untoward and anomalous complaints undoubtedly proceed from ſtopping an iſſue.

Gen. III. Such means as excite a certain uneaſy ſenſation in the ſtomach, which is uſually termed ſickneſs; hence remedies of this genus are called *nauſeatives*, and, in an increaſed degree, excite vomiting.

I have placed this important tribe of remedies in a genus by itſelf, that I might have an opportunity of conſidering it diſtinctly.

The nauſeatives are indicated in all caſes where irregularity of the circulation, ſecretions, and excretions, proceeds from ſome conſiderable impediment to its due determination. I have already, Chap. II. Gen. IX. juſt hinted at the uſe of nauſeatives in high

and inflammatory fevers; but they are alſo very beneficial in diſeaſes of an oppoſite nature: their effects may be explained by an example.

If a ſmall portion of emetic tartar or ipecacuanha be taken by a perſon in a fever, ſo ſoon as a nauſea comes on, the pulſe is reduced in point of ſtrength, the heat is diminiſhed, a diſtreſſing anxiety and languor is brought on; and if the ſickneſs at ſtomach be conſiderable, a cold ſweat breaks out, and the patient may even be thrown into a deliquium.

Here an ungrateful ſenſation, propagated by ſympathy from the ſtomach to the heart, arreſts, as it were, the febrile torrent of the circulation, checks the morbid determination, reſolves the ſpaſmodic conſtriction of the ſuperficial veſſels, and lowers the fever nearly as much as a large bleeding; though the mode of operation is to be accounted for on a different principle; and I will venture to aſſert, on the authority of long experience, that the ſuperiour ſucceſs of modern practice in all febrile diſeaſes, has been more owing to the uſe of this genus, than to any other circumſtance of treatment; and it has even ſuper-

ſeded

ſeded the neceſſity of frequent and profuſe bleedings in inflammatory diſeaſes.

Thus I have known a few doſes of an antimonial, and even of ipecacuanha, gradually increaſed, not only abridge the term of fever, but as it were, force a criſis, by opening all the ſluices at once, and producing gentle retchings to vomit, opening the belly, increaſing the diſcharge by the kidneys, promoting a warm ſweat, and, where the lungs were affected, by producing an eaſy and copious expectoration.

Theſe ſudden and ſalutary changes are totally to be attributed to the nauſeative impreſſion made on the ſtomach, which removing, by ſympathy, the ſpaſmodic conſtriction of the excretory organs, the fever ceaſes, not in conſequence of a critical diſcharge of a ſuppoſed noxious matter, but ſolely by the impediments to free circulation, ſecretion, and excretion, being removed; and I am firmly perſuaded that ſuch practice, judiciouſly conducted, would terminate fevers in a few days, perhaps hours, which, according to a leſs deciſive mode of management, would have been protracted for weeks. But mere protraction is not the only injurious conſe-

quence; for, as the danger increaſes every hour, an early check often prevents a fatal termination.

Even in ſimple remittent fevers, or when they are complicated with malignity or putreſcency, or are rheumatic or eruptive, the nauſeatives are good febrifuges; and we know that in agues, a vomit given before the acceſs, has been of conſiderable uſe in preventing the fit.

The benefit derived from emetics in hemorrhages, when not too profuſe, and in diarrhœa and dyſentery, is well known, eſpecially if they increaſe the determination and diſcharges by the kidneys, and by ſweat; and this effect is produced by changing the habit of determination, and permitting the overcharged organs to recover their tone: Hence alſo the beneficial uſe of nauſeatives in various affections of the lungs, as aſthma, catarrh, &c. and why they are very effectual in checking the progreſs of an inflammatory cough, and preventing its becoming confirmedly hectical.

Antimonials are ſuppoſed to have a peculiar power in checking fevers; but the late Dr. *Lewis* of Kingſton, an excellent chemiſt, with

with whom I ſometimes had profeſſional intercourſe, aſſerted, that he had effected as important and ſalutary changes by ipecacuanha as by James's Powder, (which he ſtrongly reprobated) or by any other reguline antimonial, and with much more ſafety; alledging, that it was the degree of ungrateful ſenſation excited in the ſtomach, and not the means, which produced the beneficial effect; and I am now convinced that his obſervation was juſt.

Even in diſeaſes of the ſecond claſs, which are ſuppoſed to depend upon viſceral obſtruction, (ſee p. 345 of this volume) I have ſeen very beneficial effects in a patient of his and mine, from repeated and daily nauſea produced by one, two, or three grains of ipecacuanha for ſome weeks, even though there was reaſon to believe that there were obſtructions of the liver and meſentery; and for ſome years paſt I have uſed the ſame remedy with ſucceſs, in rivetted pulmonary affections, as well as thoſe of the abdominal viſcera, with or without hectic fever.

It is a ſingular fact, that ipecacuanha, and white and blue vitriol, leſſen the emetic power of the active antimonials.

It

It is not merely ſufficient that the natural evacuations ſhould, during diſeaſe, be as regular as in health; much more is requiſite; for it is often neceſſary to increaſe them conſiderably: hence the uſe of purgatives, as derivants, in fevers, inflammation, apoplexy, &c. when they act on the animated ſyphon as powerful revellents, and promote regular circulation, by diverting a part of the circulating fluids through ſome of the excretions.

With reſpect to various kinds of dropſy, theſe derivants act by promoting abſorption of the extravaſated fluids, by leaving more room for the aſcent of the ſerum through the abſorbent ſyphons, and giving it a determination to the bowels, the kidneys, or the ſkin.*

Gen. IV. There is another mode of diminiſhing morbid determination, by the more immediate action of remedies on the diſeaſed organ. Thus indolent tumours are gradually reduced by the immediate application of thoſe remedies called *diſcutients* or *repellents*; anaſarca and oedematous ſwellings are re-

* The compariſon drawn from the ſyphon is not philoſophically accurate; but it is only introduced for the purpoſe of explaining the principle of derivation.

moved

moved by friƈtions; and it is probable that remedies called *deobſtruents* aƈt in ſome ſuch way on the internal obſtruƈtions of the viſcera; though this ſlow mode is inferior in efficacy to the uſe of nauſeatives, to a courſe of which, however, few will ſubmit.

All external applications of this kind are ſtrongly contraindicated, when there has been a ſalutary depoſition made on a particular organ: hence great injury has been ſuſtained by the uſe of repellents in gouty ſwellings of the extremities, eryſipelatous eruptions, or hemorrhoidal ſwellings.

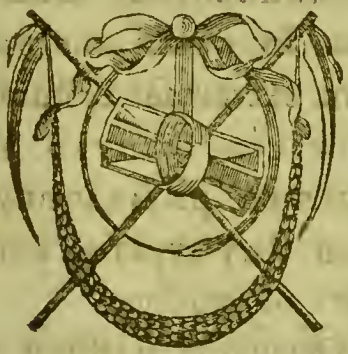
It may not be improper to attempt a theory of the operation of what are uſually termed *deobſtruents*. Obſtruƈtions may take place in the circulating organs, as in ſpaſmodic conſtriƈtions, and polypous concretions in the heart and large blood-veſſels; but the latter are very rare in proportion to the former. What is uſually deemed chronic obſtruƈtion takes place chiefly out of the limits of the circulation, and is the effeƈt of ſome perverſion of the ſecreted humours; hence dropſical ſwellings, ſcrophulous tumours, ſchirrus, biliary, and calculous concretions, &c. I have remarked (Vol. I.) that the

the uſeleſs ſolids are rendered fluid, and in this ſtate abſorbed and diſcharged from the body; and we know, from the reſolution of a bruiſe, that the conſtitution has a power of abſorbing coagulated blood, eſpecially if aſſiſted by ſuch applications as, by a mechanical or chemical power, enable the weakened veſſels to act upon the extravaſated fluid, and fit it for abſorption; a power which has been attributed to *attenuants*, or ſuch remedies as are ſuppoſed to divide and give fluidity to the humours; but it is probable that deobſtruents act chiefly by a ſalutary ſtimulus, by which the veſſels change and abſorb the extravaſated fluid; poſſibly in both ways.

I have been more prolix in my remarks on this genus, as they explain ſome very important points of practice.

Gen. V. Derivants without evacuations, either natural or artificial, are ſometimes indicated in diſeaſes where the determination to certain organs is leſs than in health: hence the uſe of frictions, ſinapiſms, and electricity, in palſied and waſted limbs; and under this head we may bring the uſe of gently ſtimulating foods and exerciſe, to promote

promote the nouriſhment of emaciated bodies, by increaſing the fluxion to the extenuated organs, in a way ſimilar to the action of cordials, when they change the cadaverous aſpect of a fainting perſon to his former florid appearance.



CHAP. IV.——Class II.

Mechanical Powers.

Dead Fibres, why ſo called—their ſuppoſed Irritability how accounted for—Rigidity of the dead Fibres how diminiſhed—Laxity of the dead Fibres how leſſened—Roborants what—Aſtringents what—Eſcharotics what—Anthelminthics what.

PROP. IV. When the dead fibres of certain organs are so much changed by disease, as to be either too much relaxed or constricted, such means are indicated, as may restore them to their healthy state.

BARON *Haller* has attributed to the muſcular fibres a quality which he terms *irritability*, and which remains after death; and therefore does not depend on nervous power, but on a certain gluten which enters into their ſtructure. This we may term a quality of the *dead* fibre; yet it is not confined to muſcular fibres, but reſides

ſides alſo in all the ſoft ſolids of the animal body: of this the operation of tanning leather, and the paleneſs of the lips when touched by a ſolution of alum, afford a direct proof. I ſhall endeavour to explain how this change is effected, when I come to the Orders.

ORDER I. *When the dead fibres of certain organs are, by diſeaſe, rendered ſo ſtiff, contracted, and hard, as to be unable to perform their motions with due facility, ſuch means are indicated as may reſtore them to their due flexibility.*

The rigidity of fibres may be owing to a deficient determination and ſecretion of the fine fluid into the interſtices of the cellular filaments which connect them, ſo that they are neither ſufficiently nouriſhed nor moiſtened; ſometimes in conſequence of ſome of of the veſſels becoming impervious: hence waſting and contraction of the muſcles and tendons of a joint; and hence we can account for the benefit ſometimes derived from warm pumping, vapour baths, &c. in ſuch caſes, which, by mechanically ſoftening the rigid parts, open a paſſage for the natural fluids

fluids which had been previouſly ſhut out; or the ſtiffneſs and hardneſs of an organ may be owing to a concretion of the ſecreted fluid into a ſolid ſtate, as in ſchirrous tumours and ſtiff joints.

How far may an effect, ſimilar to that of the vapour bath, reſult from the liberal uſe of tepid watery drinks in high fevers, wherein the tenſion of the fibres ſeems to be ſo great as to check the internal cellular ſecretions? May not a general warm bath (independent of the lenient impreſſion made on the nerves) act by its mechanically relaxing quality?

ORD. II. *When the dead fibres of certain organs are, by diſeaſe, rendered ſo ſoft, lax, and pliant, as to be unable to perform their office with due vigour and energy; ſuch means are indicated as may reſtore them to their due tone and elaſticity.*

That ſuch a ſtate of the fibres takes place, even, in ſome degree, in health, is evident from the difference between the firm and phlegmatic temperaments; (ſee Vol. I. p. 224) but this difference is greater in diſeaſe, as in a cachectic and dropſical ſtate of the body.

Gen. I.

Gen. I. *Roborants* are ſuch remedies as are ſuppoſed to have this power; and as in this ſtate, which is oppoſite to that of Ord.I. the ſecretion into the cellular interſtices is too abundant, they may act by a mechanical power on the ſolid parts with which they come in contact. Frictions with the fleſh bruſh, cold air, the cold bath, and exerciſe, ſeem to act mechanically, not only by checking this too abundant ſecretion, but by increaſing the tenſion of the abſorbents, and their power of ſucking up from the cavities the relaxing and macerating ſerum. Bandages act alſo in this way, in reducing the ſwelling of an œdematous limb.

How does the *Peruvian Bark* act as a *roborant* or ſtrengthener in diſeaſes owing to, or connected with, the laxity of the ſolids? Does it act mechanically on the *dead* ſolids, as oak bark hardens leather? In the ſtomach and bowels, with the ſurface of which it comes in contact, it may have this effect in ſome degree; but when it paſſes into the circulation, where it mingles with a very large qnantity of fluids moved on in a conſtant flow, from and to the heart, it cannot have time to act on the dead fibres with any degree

degree of effect, were its proportion to that of the fluids greater than it is. How then is it probable it does act? Partly at leaſt by a mechanical power on the fibres of the ſtomach and inteſtines, which effecting a certain change on the interwoven nerves, leſſens their ſenſibility; which change may, by ſympathy, be communicated to the nerves of the more remote organs. Its mechanical action may however be greater, when it arrives in the ſmaller ſecretory and excretory organs, and, as it were, out of the tide of the circulation.

Whether this conjecture is, or is not, well founded, ſome practical inferences may be offered with reſpect to the uſe of this remedy, and others of this genus.

1*ſt*. If we preſcribe bark as a ſtrengthener to perſons, and in diſeaſes, in which the vital powers are languid, and the ſenſibility rather deficient than exceſſive, we ſhall ſucceed beſt with it if we join warm ſtimulants with it, to increaſe the energy of both the nervous and circulating ſyſtem; hence the utility of joining with it ſnake-root, and other heating ſtimulants, in ague, cachexy, dropſy, and palſy.

2*dly*. If

2*dly*. If it be indicated in diſeaſes in which the ſenſibility is either exceſſive or depraved, it ought to be combined with the nervine medicines.

3*dly*. If indicated in fevers in which the paroxyſm or exacerbation of fever runs high, and approaches the inflammatory type, the force of the fever ought to be reduced before we adminiſter it, *even* in the remiſſion, and even then with the cooling ſedatives.

4*thly*. In low fevers, whether nervous, malignant, or putrid, it may be given at an early period, and accompanied with wine and other ſtimulants.

When remedies of this genus act mechanically on the dead fibre, they alſo, as has already been obſerved, produce an adequate change on the interwoven nerves, merely by mechanical preſſure; manifeſt inſtances of which we have in the benumbing effect of a tourniquet; and relief obtained by a very irritable young lady, whom Baron *Van Swieten* ordered to be ſwathed: we know alſo that a ſchirrus becomes gradually leſs ſenſible, as it becomes harder.

Remedies of this genus are contraindicated in all caſes where the dead ſolids

are rather in a ſtate of tenſion than of relaxation.

Gen. II. When the excretions are morbidly increaſed in certain diſeaſes, ſuch means are indicated as, by making a change in the dead ſolids, may reſtrain them.

Remedies of this genus are commonly called *aſtringents*; and as they are only a higher degree of roborants, their operation may partly be underſtood from what is ſaid under Genus I. On this head, however, which refers to their mechanical action, it may be obſerved, that by drawing together, or purſing up, the mouths of the veſſels, it reſtrains the diſcharge through their orifices.

It has already been remarked, in the former chapter, that morbid diſcharges are often ſucceſsfully reſtrained by a counter-determination; or by diverting the fluxion from the weak organs; and this mode is much more ſafe and ſucceſsful than the uſe of aſtringents.

The mechanical aſtringents are contra-indicated,

1*ſt*. From the little dependance we can have on their effect, unleſs by their local action on the ſtomach and bowels.

2*dly*. In

2*dly*. In all critical diſcharges they may do much miſchief.

3*dly*. Becauſe, even in caſes not critical, when they act ſuddenly and powerfully, they dam up or confine the humours in the veſſels or excretory ducts; which are thereby oppreſſed, and farther weakened, by the accumulated fluids: hence anxiety and diſtenſion of the belly, when dyſentery or diarrhœa are ſuddenly ſtopped, and which can only be removed by a renewal of the diſcharge; hence I have known fever, delirium, and, in one inſtance, madneſs, from a ſudden ſuppreſſion of a diſcharge of blood by the piles, from the humour's being determined to the brain; and for the ſame reaſon hectic ſweats and diarrhœa ſucceed each other; the ſuppreſſion of one producing an increaſe of the other.

Gen. III. In ſome diſeaſes, a mechanical deſtruction of ſome part of the ſolids may be indicated: hence the uſe of cauſtics in opening impoſthumations, forming drains, removing caries of the bones, or deſtroying fungous fleſh.

Gen. IV. When certain animals are generated in the body; ſuch means are indicated as may deſtroy and expel them.

Round worms and aſcarides being bred in the ſtomach and inteſtinal canal, and the dracunculus in the fleſh; ſweet oil, mercury, tin, iron, &c. deſtroy them, partly by a mechanical, and partly by a chemical power.

CHAP. V.

Alterant Powers.

Phyſiology and Pathology of the Fluids not well underſtood—Alterants what—thoſe which act by Diffuſion, their mode of Action—by chemical Mixture—Antacids what—Antiſeptics what—Correctors of Acrimony what.

PROP. V. When the blood, or humours secreted from it, are changed by diseases from their natural state, such means are indicated as may restore them to their healthy condition.

THOSE means which produce theſe ſalutary changes I term *alterants*.

A variety of names have been beſtowed on this claſs of remedies, as diluents, attenuants, ſweeteners, deobſtruents, &c. moſt of them upon vague or falſe principles of analogy.

The Phyſiology and Pathology of the fluids, as I have remarked, Vol. I. and in ſeveral paragraphs of this, are ſo imperfectly underſtood, that very little can be ſaid with

with any degree of certainty concerning the changes they undergo, or how thoſe changes are effected, by means of remedies, in diſeaſes.

We may conſider the effects of alterants on our fluids in three points of view.

1*ſt*. By mere mechanical mixture or diffuſion.

2*dly*. By chemical mixture, or aſſimilation.

3*dly*. By changes made on them through the medium of their containing organs: the operation of the third order is referable to the two firſt claſſes; but as phyſicians are not agreed on this head, I ſhall offer my opinion on the ſubject.

ORD. I. *Alterants which act by mere mechanical mixture or diffuſion.*

Gen. I. When the watery principle of the blood or ſecreted humours is ſuppoſed to be deficient, ſuch means are indicated as may increaſe it.

Of this we have an example in the uſe of warm water, whey and watery decoctions of vegetables, in high and inflammatory fevers, in which the blood is ſuppoſed to be too thick and denſe, and the ſecretions and excretions generally very ſparing.

It

It is probable, that the uſe of what are called *diluents* may have ariſen from the denſe and buffy appearance of the blood in ſome diſeaſes; but this is not a certain criterion of a diſeaſed ſtate of the fluids; for in women who are pregnant, blood taken away has almoſt always that appearance; and even in inflammatory diſeaſes, the denſe and buffy appearance of blood drawn depends on the ſize of the orifice, the temperature of the air, &c. Tepid diluting drinks may however be of ſize as ſedatives, and as increaſing the ſerous excretions.

Gen. II. When the watery principle of the blood, or ſecreted humours, is ſaid to be too abundant, ſuch means are indicated as may diminiſh it. Hence the uſe of gelatinous vegetables, as ſtarch, gum arabic, and of iſinglaſs, chocolate, ſago, &c. in caſes where the blood is ſuppoſed to be too thin and ſharp, as in ſome kinds of hemorrhage, diarrhœa, dyſentery, diabetes, ſerous catarrhal defluxions, profuſe ſweats, &c.

But the theory upon which theſe remedies are given, does not ſeem to be well founded. They may indeed act as *demulcents* in the firſt paſſages, by leſſening irritation, as in aphthous incruſ-

incruſtation; but they are totally inadequate to the purpoſe of making any change on the general maſs of blood: hence the uſe of ſpermaceti mixtures, mucilaginous emulſions, &c. in coughs is not merely ineffectual; it is ſo far dangerous, as, by relying on it, the uſe of powerful and effectual derivants is ſuperſeded or neglected; and many have fallen a ſacrifice to this trifling practice.

Gen. III. When the circulating or ſecreted humours acquire ſuch a morbid conſiſtence, as to be unable to paſs with due facility through their containing cavities, ſuch means are indicated, as may, by a chemical reſolution of their conſtituent principles, reſtore them to due fluidity.

Dr. *Boerhaave* employed the theory of obſtruction to account for many morbid phœnomena; and ſuppoſed that groſs glutinous or viſcid particles ſtuck in the ends of the ſmall veſſels, and blocked them up. Hence *attenuants* were preſcribed, not only to remove the obſtructions, but to thin the general maſs; as nitre, ſoap, &c.; but the idea of a few grains of a neutral ſalt being able to act upon, and attenuate, many pounds of circulating humours, is ſurely contrary to true philo-

philoſophy. Obſtructions, as I have remarked, Chap. III. Ord. III. Gen. III. under the head of *Deobſtruents*, are chiefly formed out of the limits of the circulation: hence ſchirrous and ſcrophulous tumours, biliary and calculous concretions, &c. With reſpect to the tumours, I have endeavoured to give a rational theory of the mode of their operation. With regard to calculous concretions, a new theory has been lately ſtarted concerning the operation of *lithontriptics*; but whether well founded or not, it is certain that the aqua mephitica alcalina, if it cannot diſſolve large and hard calculi, certainly prevents farther accretion. It were much to be wiſhed that we were poſſeſſed of a ſolvent for biliary concretions: æther and oil of turpentine combined, have been recommended; but they lie ſo much out of the reach of medicine, that little more can be expected from any medicine, than that it may ſo change the ſecretory veſſels of the liver, as to correct the diſpoſition of the bile to coaguiation.

Ord. II. *Alterants which act by chemical mixture and aſſimilation.*

Manifold experiments ſhew that very great changes may be made by chemical mixture, and

and it is certain that ſome are produced in our bodies; we now proceed to ſhew how, and in what degree, they may be effected.

Gen. I. When a morbid acid prevails in the ſtomach and bowels, thoſe remedies are indicated which may neutralize it.

If a perſon ſwallows a large quantity of mineral acid, not ſufficiently diluted, and which may act as a poiſon, we know that large draughts of water in which ſalt of tartar is diſſolved, is the beſt remedy; as the chemical mixture converts it into an inoffenſive neutral ſalt; and chalk or magneſia corrects the acid in the ſtomachs of children, and in other patients whoſe imperfect digeſtion generates a ſharp acid: but in ſuch caſes they are mere palliatives; the radical cure muſt depend on reſtoring the tone of the debilitated organ; in effecting which, the elixir of vitriol, *a mineral acid*, is no bad aſſiſtant. *Antacids*, it is probable, do not, as ſuch, act in the maſs of blood. They are commonly termed *abſorbents*.

Gen. II. When an alcaline and putreſcent acrimony is predominant, ſuch remedies are indicated as may correct it.—Some very ingenious opinions, lately advanced, ſeem

ſeem to contradict the idea of ſpontaneous putrefaction of the blood, and other humours, independent of any previous change in the ſolids. The truth ſeems to lie between both opinions; for it is not improbable that a ſpontaneous chemical depravation of the humours may ſometimes take place, before the organs are eſſentially diſeaſed; as in the ſea ſcurvy; though, in fevers produced by putrid effluvia, the firſt morbid change ſeems to take place in the nervous ſyſtem, and is ſoon propagated to the circulating and ſecretory organs; and in this caſe the putreſcency of the fluids ſeems to be only an effect. Acids, vegetable and mineral, may correct putreſcency in the firſt paſſages, by neutralizing the alcalino-putreſcent quality of the bile and other ſecreted humours in the ſtomach and bowels; and there alſo bark and ſweet wort, by undergoing the fermentative proceſs, may impart a portion of fixible air to the vitiated humours, which, it is ſuppoſed, they loſe by the putreſcent ferment. But we know that breathing a pure and cool air, and the uſe of ſtimulants, as wine and ſnake-root, and of tonics, as bark and the mineral acids, are the chief remedies.

Gen. III. When the blood or humours are tainted, either by infectious communication, or by certain morbid changes taking place in the body, such means are indicated as, by a chemical assimilation, may correct the acrimony.

Thus mercurials correct the venereal acrimony; and a variety of what are called *sweeteners* are made use of to correct other depravities of the humours. But none of these, even mercury, have any peculiar power; for the lues venerea is cured by other means, beside mercury.

The celebrated Dr. *Boerhaave*, though a chemist, endeavoured to account for many of the operations and changes of the animated machine upon mechanical principles; and even at this day, such modes of reasoning are to be met with in medical treatises, though they are obviously fallacious. Experiments evince the wonderful changes which may be produced by chemical mixture, though the precise mode in which these changes are produced may not always be satisfactorily explained.

It has been remarked, (Vol. I. §. 62, page 138, &c.) from the instance of the effect of inoculation,

inoculation, that an exceedingly ſmall particle of morbid matter ſhall aſſimilate, or ſo taint the maſs of our humours, as to produce millions of eruptions, each of which will afford matter for propagating a ſimilar ferment: a wonderful proof of chemical aſſimilation! and upon this principle we may account how a very ſmall portion of an alterative medicine may produce ſome great and extenſive changes on the acrimony of our humours; and, at leaſt, render it inoffenſive. But it is probable that the chief changes in this way are not effected on the humours in the courſe of circulation, as the rapidity of their motion, in the veſſels which convey red blood, would be an impediment to the aſſimilation; but rather in the lateral, ſecretory and excretory tubes, where the motion is more tardy, and the remedy may act in a more concentrated form.

ORD. III. *Alterants may act by changing and correcting a morbid ſtate of the humours; through the medium of the containing organs.*

We know (ſee Vol. I.) that acrimony is generated in our bodies *even* by the natural and neceſſary operations of the conſtitution; and

and this very circumſtance muſt tend to promote the aſſimilation and increaſe of any acrimonious taint that may be accidentally introduced into the habit: But it is very probable, that many faults of the blood and humours proceed chiefly from a morbid ſtate of the circulating and ſecretory organs. If a perſon of a cachectic habit has an ulcer which diſcharges a thin ichor, the Peruvian bark will promote a diſcharge of good pus; not perhaps by any direct change made on the humours, but by increaſing the tenſion of the ſolids to a degree which approaches the inflammatory ſtate; in this way alſo putreſcent and other acrimonies are chiefly corrected; for ſo long as the ſecretory and excretory organs do their office properly, it is ſcarcely poſſible that acrimony can ſubſiſt in the general maſs of fluids to any conſiderable degree, unleſs it be communicated by infection.

CHAP.

CHAP. VI.

THERAPEUTIC CAUTIONS.

General Maxims for the Adminiſtration of Medicines according to—Age—Sex—Temperament—Nature of the Diſeaſe—a certain Order of adminiſtering Remedies—Rules for Choice of particular Remedies—Danger of Novelty in Practice—Rules for Doſes—Times of Adminiſtration—correſpondent Regimen.

PROP. VI. IN FORMING INDICATIONS OF CURE ON RATIONAL THERAPEUTIC PRINCIPLES, A VARIETY OF CIRCUMSTANCES OUGHT TO BE TAKEN INTO CONSIDERATION; OTHERWISE WE MAY NOT ONLY BE DISAPPOINTED IN OUR EXPECTATIONS OF SUCCESS, BUT THE PATIENT MAY BE IRREPARABLY INJURED.

I Shall here ſubjoin a few cautions which may be of uſe.

I. *Age.* We ought to be very ſparing in the uſe of medicines to infants and children, and thoſe ought to be of the mildeſt kind; becauſe

becauſe of the great irritability of the ſyſtem. Old perſons ought not to uſe draſtic medicines; they are contraindicated by debility of the vital powers.

II. *Sex.* Females, from their being more irritable in general, do not bear the uſe of rough evacuating remedies ſo well as males.

III. *Temperament.* Delicate perſons do not bear evacuations well. Thoſe of a firm or plethoric habit bear bleeding better than any other evacuation; the phlegmatic bear vomiting and purging well; thoſe of the arid habit require very mild emetics, and lenient purgatives.

IV. *Nature of the Diſeaſe.* If acute and violent, no time is to be loſt; but the moſt powerful means muſt be uſed to prevent a fatal termination: in ſuch caſes, many are loſt by a timid indeciſive practice: in ſlow diſeaſes there is more time for deliberation.

V. *The Order of Adminiſtration.* Where bleeding is neceſſary, it ought to precede the uſe of all other remedies; becauſe it may render their uſe more ſafe and effectual. As the ſecretions and excretions are often deficient or irregular, evacuants are generally neceſſary at the commencement of diſeaſes; but

but leaſt ſo in thoſe which are purely nervous. In obſtinate conſtipation, a purgative ought to precede the uſe of an emetic; —the groſſer evacuations ought to be promoted before the finer: thus purgatives, if neceſſary, ought to precede diuretics and ſudorifics; promoting the excretions renders certain powerful remedies more ſafe and effectual, eſpecially opium and the bark; and under a courſe of alteratives, they ſhould be occaſionally interpoſed, to carry off thoſe acrimonious particles which may have undergone previous correction: But they ought never to be uſed on frivolous occaſions, or as preventives of poſſible diſeaſe.

VI. *The choice of the individual Remedies of the Genus indicated.* When the indications are formed, the preſcriber is then to ſelect the *indicata*, or the individual remedies from others of the ſame Genus: In this, ſome rules are to be obſerved.

1ſt. No remedy ought to be employed that has weak or doubtful powers. Were we to adhere ſtrictly to this rule, the materia medica would be reduced to a very ſmall compaſs. What can be more frivolous than preſcribing drops of tinctures of vale-

rian, caſtor, and ſaffron; or grains of contrayerva, crabs eyes, calces of antimony, æthiops mineral, calcarious earths, &c. when they may be taken in ſubſtance in doſes of an ounce, without any remarkable medical effect? Would not common water, ſugar, and wine or brandy, be proper ſubſtitutes for all the diſtilled waters, ſimple and ſpirituous, and all the ſyrups in the ſhops?

Medical men ought never to rely on ſet formulæ of extemporaneous preſcription; but deduce the indicata from the indication.—Nothing can afford a ſtronger proof of a deficiency of medical principle, than ſervilely copying choice and infallible receipts; the mode of practice is ſuitable only to old nurſes and quacks.*

* The great Mr. *Boyle*, by neglecting the ſtudy of medical principles, expoſed himſelf to groſs impoſition, from the credulity or artifice of others, by adopting every trifling remedy recommended to him as powerful, ſpecific, or infallible; and publiſhing them as ſuch. This implicit confidence was certainly unworthy of ſo great a philoſopher, and ſubjected him to the ridicule of phyſicians. Our old Diſpenſatories are full of preſcriptions of ſuch remedies, recommended by moſt ridiculous encomiums; from theſe the Lady *Bountifuls* transſcribed very liberally into their *invaluable* receipt books; and from the ſame ſource the quacks have borrowed all their choice and infallible remedies; ſo that no other qualification is required to conſtitute a quack, than extreme ignorance and credulity, and the moſt conſummate aſſurance.

2dly. If

2dly. If the ordinary routine of practice be ineffectual, it is the indiſpenſible duty of the preſcriber to adopt means, how unuſual ſoever, that are likely to be beneficial; but he hazards much in the attempt; and may be utterly ruined by a faithful diſcharge of his duty. "The dunces, who are the moſt numerous in "every profeſſion, are always at war with "genius, and watch its miſcarriages with an "envious malignant eye; all his preſcriptions "muſt remain on the apothecary's file, and "riſe up in judgment againſt him; and upon "any miſcarriage, the outcry is raiſed and "propagated with the utmoſt malignity."* But it is not *miſcarriage* alone, but even *ſucceſs*, by a novel practice, that may blaſt the reputation of a phyſician. Not a century ago Dr. *Groenvelt* was proſecuted and fined for mal-practice in adminiſtring *cantharides* internally: The iſſue ruined the unhappy Doctor, and taught his envious and malignant perſecutors the ſafety and value of his practice. Some years after, a very ingenious and able phyſician, Dr. *Thompſon*†,

* The late profeſſor *Gregory*'s introductory lecture.

† *Thompſon* was an irregular, eccentric man; but whoſoever has read his Conſultation Caſes muſt acknowledge that he poſſeſſed a great fund of ſound medical learning, grafted on an uncommon portion of genius.

ſunk under an unjuſt and malignant attack, on account of a ſuppoſed novel and injurious practice in the caſe of Mr. *Winnington*, a ſub-miniſter, and friend of Sir *Robert Walpole*; and the late Dr. *Blair*, of Corke, was nearly ruined at his firſt outſet, becauſe he ſtopped a moſt dangerous hœmorrhage by the internal uſe of the *Tinctura Saturnina*.* Until Dr. *Boerhaave* hinted at, and Baron *Van Swieten* ſtrongly recommended, the internal uſe of the *corroſive ſublimate*; a man of leſs notoriety would probably have been arraigned at the Bar, if he had ventured to preſcribe it in this way; and the *Blue Vitriol* was deemed only fit to eat away proud fleſh, and totally unfit for internal uſe, until the *Baron* preſcribed a preparation of it, as a valuable and ſafe

* The patient was an alderman of Corke: his phyſician, *Rogers*, was abſent, and *Blair*, then a young man, was called in. None of the phyſicians would conſult with him, *becauſe he had ſaved his patient by poiſoning him*; a paper war commenced, and the diſpute ended by a reference to Dr. *Mead*, the great medical luminary of the day, who obſerved, that it was ſomewhat extraordinary that a phyſician ſhould be condemned for having cured his patient by any means whatſoever. Many of the gentlemen of Corke, and in the neighbourhood, eſpouſed the cauſe of the oppreſſed ſtranger, with a generoſity and liberality of ſpirit which diſtinguiſhes that eccentric nation; and a circumſtance which would probably have ruined him in Great-Britain, eſtabliſhed his reputation in Ireland.

ſafe remedy, in ſome inveterate nervous diſeaſes. Forty years ago, *Hemlock* was deemed a virulent poiſon; now its internal uſe is known to be, *at leaſt*, ſafe, even in very large doſes; and yet I have known more than one inſtance wherein a phyſician's reputation has been injured, becauſe he dared to preſcribe, *with ſucceſs*, ſome of the *reputed* virulent poiſons. This would not be the caſe, if perſons of cultivated underſtandings would exerciſe their right of enquiry into the principles of medical practice.

VII. *Simplicity of Preſcription.* When a number of articles is crouded into one medicine, they may counteract each other; and it will be impoſſible to determine to which of the articles the ſalutary effects are to be attributed: the ſlow progreſs of medical practice toward improvement may be partly imputed to abſurd and unmeaning combinations in preſcription; ignorance of chemical principles is alſo frequently productive of egregious blunders.

Gaubius, in his treatiſe *de formulis*, and *Hoffman*, vol. 5, p. 408, have made ſome uſeful remarks on preſcription. There are four

parts in preſcription: 1*ſt*. The *baſis* is that which is chiefly depended upon, *e. g.* extract of bark. 2*dly*. The *adjuvans*, as a decoction of bark as a vehicle to the extract. 3*dly*. The *corrigens*, or what makes it ſit eaſily on the ſtomach, as a ſpirituous tincture of the bark: Here three of the four are united. The 4th is the *conſtituens*, or that which unites ingredients which would not otherwiſe mix, as yolk of egg, ſugar, gum arabic, &c. by which oils are combined with a watery vehicle: but in the moſt ſimple preſcription, where there is but one ingredient, that muſt be the *baſis*.

VIII. *The Doſe* of remedies ought to be accommodated to age, ſex, temperament, and the nature of the diſeaſe. It is often extremely difficult to aſcertain the proper doſe of a remedy; for, even in the ſame patient, what may fail of its due effect at one time, may operate too powerfully at another. This difference of effect proceeds chiefly from the different ſtates of the ſtomach with reſpect to its ſenſibility.

When great and ſudden changes are to be effected, the doſes of remedies ought to be very conſiderable: thus in apoplexy, very draſtic

draſtic purgatives muſt be given for the purpoſe of making a ſudden and forcible determination from the brain. In general, however, emetics and purgatives ſhould be given in divided doſes, to avoid the hazard of doing too much.

Active remedies ought always to be given in gradually increaſed doſes, otherwiſe we ſhall often be diſappointed; becauſe, in many inſtances, the effect is leſſened, from the nerves of the ſtomach, and indeed the whole ſyſtem, being habituated to the ſame degree of ſtimulus.

The following Poſological Table is taken from *Gaubius* de Formulis, and is very uſeful, though not abſolutely certain.

Suppoſe an adult patient requires

1 or ʒi for a doſe,

Then the doſe for a patient

Aged 21 to 14 is	2-3ds or ℈ij
14 to 7	1-half or ʒſs
7 to 4	1-3d or ℈j
4	1-4th or gr.xv
3	1-6th or gr.x
2	1-8th or gr.viij
1	1-12th or gr.v

The table does not go farther; but with reſpect to infants under a year, one grain may

may be deducted for every three months, and one grain may, in general, be a ſafe doſe in the firſt month after birth.

IX. *Times of Adminiſtration.* It is a good general rule to give one doſe of a medicine, before the effect of the former is entirely exhauſted. In urgent caſes, remedies ought ſometimes to be given very frequently, as the Peruvian bark in dangerous tertian and quotidian remittents. When diſeaſes have their exacerbations, or paroxyſms, as in nervous or febrile maladies, the moſt active remedies often produce the beſt effects when given a ſhort time before, or about the acceſs; becauſe the great and ſudden change they produce, may anticipate or ſuſpend the morbid change. When the change we expect, is to be effected chiefly by the impreſſion the remedy makes on the nerves of the inteſtinal canal, it ought to be taken on an empty ſtomach.

X. *Correſpondent Regimen.* This is fully treated of in the Eſſay on Regimen.

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